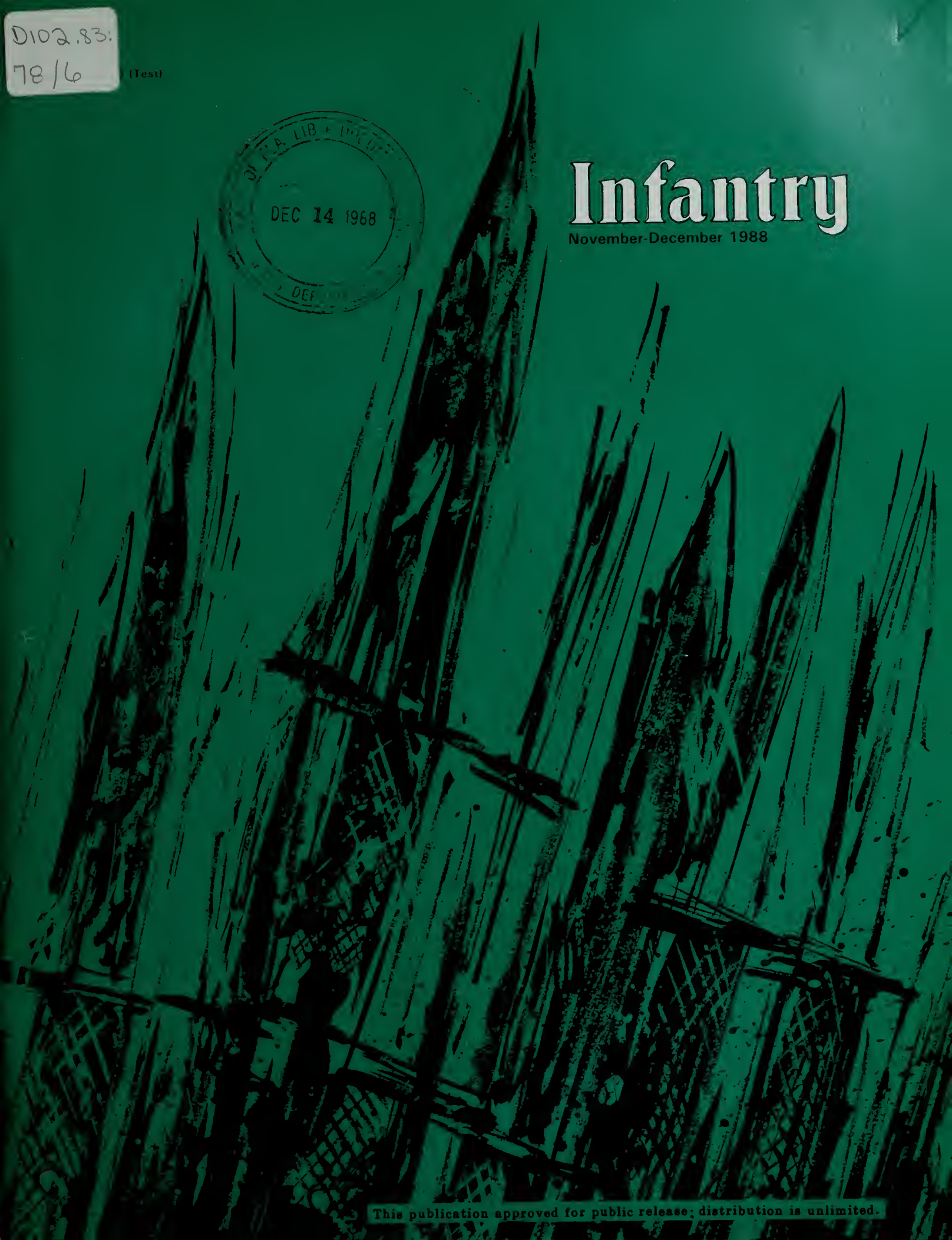
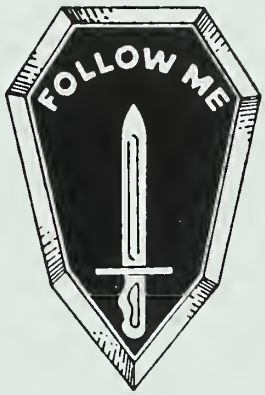
Infantry

November-December 1988



PB 7-88-6 (Test)



Infantry

November-December 1988 Volume 78, Number 6

DEPARTMENTS

● INFANTRY is an Army professional bulletin prepared for bimonthly publication by the U.S. Army Infantry School at Building 1827, Fort Benning, GA. ● Although it contains professional information for the Infantryman, the content does not necessarily reflect the official Army position, and it does not supersede any information presented in other official Army publications. ● Unless otherwise stated, the views herein are those of the authors and not necessarily those of the Department of Defense or any element of it. ● Official distribution is to infantry and infantry-related units and to appropriate staff agencies and service schools. ● Direct communication concerning editorial policies and subscription rates is authorized to Editor, INFANTRY, P.O. Box 2005, Fort Benning, GA 31905-0605. ● Telephone: (404) 544-4951; AUTOVON 784-4951. ● Second-class postage paid at Columbus, GA, and additional mailing offices. ● POSTMASTER: Send address changes to INFANTRY, P.O. Box 2005, Fort Benning, GA 31905-0605. ● USPS Publication No. 370630. ISSN: 0019-9532.

Commandant's NOTE

MAJOR GENERAL MICHAEL F. SPIGELMIRE Chief of Infantry

THE POINT OF THE SPEAR

What a privilege it is for me to return to Fort Benning as the Commander of the Infantry Center and Commandant of the Infantry School, and to serve concurrently as Chief of Infantry.

While I am gratified to have been chosen for these critical positions, I also realize that even more compelling are the responsibilities and challenges that come with them—the many tasks to be accomplished, and the awareness that many of the decisions we make at Benning influence not only the entire U.S. infantry community but every individual U.S. infantryman as well.

I feel fortunate in coming to Benning fresh from serving as the commander of the 24th Infantry Division (Mechanized). That experience sharpened my awareness of the needs of the infantrymen in the field. Historically, Fort Benning's goal has been to turn out the world's finest infantrymen. Today, more than ever, it cannot do less.

I cannot emphasize too strongly the importance of the infantryman's role in combat. I am convinced the infantryman is the ultimate weapon. Whether he walks, rides, jumps, or flies into battle, his is the most demanding role on the battlefield. He is the "point of the spear"—the cutting edge, causing it all to happen, putting together combat power at the point of decision.

At the same time, we know that although the individual infantryman has not changed, the battlefield has changed dramatically. In future wars, infantry will rarely, if ever, fight alone. Other combat arms—armor, artillery, air defense, engineer, and many others—will help the infantryman accomplish his mission. The combined arms team, therefore, is the key to success, and infantry commanders from squad through division must learn to plan their tactical operations in terms of combined arms operations. They must follow the principles of balanced firepower and mobility, because the whole purpose is to generate overwhelming combat power at a particular time and place. We must make certain that the infantryman can perform to the fullest his role as a member of the combined arms team.

I serve as your steward, and my charge is to develop good, sound infantry doctrine; to train your new soldiers and junior leaders; and to plan for and design the organizations and equipment our infantrymen will need in the 1990s and beyond. We at Fort Benning cannot do the job alone. I plan to visit all of our infantry units in the months to come, and I earnestly solicit your ideas and suggestions as to how we can improve our service to the field. I also look forward to seeing many of you at our next Infantry Conference, which has been tentatively planned for early April 1989.

In the two months I have been at Benning, I have found our ongoing actions to be both exciting and progressive. To define clearly the infantry's role on the future battlefield takes clear thinking, vigorous analysis, and realistic testing.

Technology advances, tactics change, and warfare becomes more complex. One of our most important missions, therefore, is to keep the field supplied with accurate, up-to-date doctrinal publications that have been fully coordinated with our field units and combat training centers.

Doctrine for the infantry force is dynamic and ever-changing. We have updated and revised a number of our doctrinal manuals describing how infantry fights at squad through brigade levels. In addition, we have written new manuals in the areas of antiarmor employment and long range surveillance operations.

There is a large amount of doctrinal literature

already available to our infantry leaders, but our leaders need to read it if it is to be effective. I strongly suggest that our field manuals and mission training plans be added to the professional reading lists being produced by many schools and units today.

Our training emphasis continues to focus on developing the warrior ethos—those tactical and technical proficiencies necessary for our infantry leaders to be successful in combined arms combat. These proficiencies stem from a common core of infantry tasks that are deemed critical for success. Two training initiatives with long term implications are the development of training strategies and soldier training products.

Our training strategies provide a good foundation upon which to develop soldiers, leaders, crews, and units who can win on the battlefield. This is a long overdue effort which allows us to examine the training system as an entity rather than in individual elements.

At the same time, the School has made tremendous strides in linking its individual and collective training products, which includes a complete redesign of our Soldier's Manuals. Today, we have only four Soldier's Manuals instead of the twenty we formerly had, and the information in them has been simplified. Coupled with this initiative, we have aligned the standards in the Soldier's Manuals and the standards for the Expert Infantryman's Badge. We now have one standard—the Soldier's Manual—to measure performance.

All of our MTPs for squad through battalion are at the printer, and you should have them by December. Following close behind will be the MTPs for the special platoons and combat service support units. This represents a complete overhaul of our MTPs and replaces ARTEPs 7-15 and 71-2. The MTPs themselves are organized around a common set of operations and a core of common tasks; the tasks have universal applicability and represent what successful infantry units must do in the combined arms fight.

I encourage all of our infantrymen to take a serious approach toward SQTs, and to remember that the test is being adjusted from previous years. The SQT questions in 1989 will come from the Soldier's Manuals, but not all of the tasks contained in the SQT notice will be on the test. There will be a greater variety of questions, fewer carryovers from the previous test, and more difficult questions. Soldiers must prepare diligently to succeed on this test.

We are continuing to look at the organizational structures of our squads, platoons, and companies to identify ways of standardizing them. We feel all types of infantry squads, platoons, and companies should be organized along similar lines. Through this process, we hope to improve and simplify task organizing.

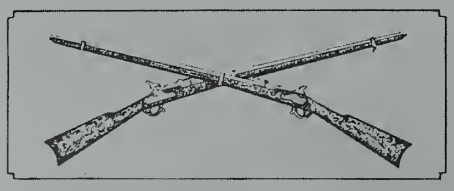
I am also dedicated to making certain that we at Fort Benning do all we can to give the infantryman the finest tools that today's technical knowledge and tomorrow's skilled workmanship can produce.

We have a small arms master plan that will bring us advanced hand-held, shoulder-fired, and crew-served weapons. Our family of mortars is in good shape and getting better, and we have made a firm commitment to develop and field an all-new medium antiarmor weapon system. In addition, directed energy is here to stay, and we are studying its future application.

We have learned much about the Bradley fighting vehicle since it was first fielded several years ago and are over the hump in that maturation process. We are looking at a future family of vehicles for development in the 21st century, a family that will benefit from our experiences in the field with the Bradley.

Some have argued that every five years or so there is enough of a change in the technology or in the art of war to require a change in doctrine as great as that from the Civil War to World War I, or from World War I to World War II. If this is true, we can expect several major new areas of concern and interest as we move toward the new century. Each of us can contribute to the kind of infantry we will have in the year 2000. The infantry of the future, in short, is being shaped by the decisions we make today.

The legacy we leave for tomorrow depends on our efforts today. A strong foundation is in place but much remains to be done. I hope you will share my pride in the fact that as our Army moves forward, the Infantry, as always, is spearheading that progress.



THE CROSSED MUSKETS

When asked to identify their branch insignia, most Infantrymen will quickly reply, "crossed rifles." Even though that answer is "in the ballpark," it is technically incorrect. The answer should be "crossed muskets!" Take a close look at your insignia. Any shoulder weapon with twisted bore is a rifle; if it is not rifled (bore twisted), it is a musket.

Ask any Infantryman to tell you the history of the "crossed musket" insignia—that piece of brass he continually wears on his uniform—and you'll usually get a shrug of the shoulders and a hesitant "I don't know" in reply.

Admittedly, knowing the history of his insignia is not mission-essential knowledge to any Infantryman. It is, however, interesting information that should be passed along.

The current insignia came into being in 1922, but the story doesn't begin there. The old badge of the Infantry was the military bugle. Its identification with the Infantry began with the days of Robin Hood and his band of foresters, who were equipped with bugles to summon comrades when help was needed. In later years, the bugle insignia was derived from the fact that all rifle and light Infantry troops in the late 18th and 19th centuries were used chiefly as scouts. The bugle, or hunting horn, was used to sound orders in the field or in garrison.

On November 19, 1875, General Orders No. 96 made several changes in the uniform and dress of the Army. One of these changes was that badges for all Infantry officers and enlisted men—except field and band musicians—were changed to "two gold-embroidered rifles without bayonets, barrels upward, on dark blue background . . ." Officers' badges displayed the number of the regiment in silver in the upper angle; enlisted men's badges showed the letter of the company in brass over the number of the regiment. Then in 1892, following the equipping of the Infantry with the Krag-Jorgensen .30 caliber, magazine, bolt-action rifle, the Infantry collar insignia was changed to show that weapon. In 1903, the new .30 caliber Springfield replaced the Krag-Jorgensen in the inventory and on the collar. In effect, when Ordnance changed the Infantry's weapons, Quartermaster changed its insignia.

In early 1922, such action prompted General Farnsworth, the first Chief of Infantry, to remark: "Do you think the cross muskets which our grandsons will wear on their collars will show some sort of rapid fire pin wheel breech action?" Subsequently, action was taken to standardize the insignia. The chosen weapon was the 1795 model Springfield Arsenal musket, the first official U.S. shoulder arm made in a government arsenal. It is a .69 caliber muzzle loader featuring interchangeable parts, a smooth bore, and a flint lock.

General Pershing, Chief of Staff, approved the collar insignia in the spring of 1922; it was authorized by AR 600-35 on 25 November 1924. Thus the origin of the crossed rifles—I mean crossed muskets—insignia proudly worn by all Infantrymen.

(Written by Second Lieutenant J. Clark Kaskie, this piece is reprinted from INFANTRY, November-December 1971, page 49.)

INFANTRY LETTERS

AMBUSH

I would like to make two comments regarding Lieutenant Chris G. Pappas' fine article "Platoon Live Fire Ambush" (INFANTRY, May-June 1988, pages 40-42).

First, I don't believe the use of the claymore to initiate an ambush is the best option. Most soldiers may prefer to use the most reliable weapon, ordinarily a closed-bolt weapon such as the M16.

Second, despite the lack of hits contributed by the M60, it is probably the best weapon for preventing the enemy from taking immediate action against the ambush force (at least psychologically). Many combat veterans have said that what the M60 did best was keep the enemy pinned down. As a matter of fact, if Lieutenant Pappas found the claymores struck low, I would think they would be excellent weapons to use when the enemy is forced to the ground seeking whatever deadspace may be available.

I hope more articles of this type make all the professional journals. Lieutenant Pappas could have just told us the "how to," but he went on to provide some lessons learned.

DAVID L. WALTER
Captain, USMC
1st Marine Division
Kansas City, Missouri

CONFEDERATE CANNON

Pertaining to the news item on a Confederate Napoleon 12-pounder cannon in the Infantry Museum (INFANTRY, July-August 1988, p. 9), I have additional information on these cannon, which were manufactured during the War Between the States in Columbus, Georgia.

During 1978 and up until September 1980, I was involved with the Phenix City (Alabama) Historical Society doing on-site research (and location determination) for the Confederate fort installations that provided the defense of Columbus.

While involved in this research, through conversations with local "old-timers," I was led to believe that in the days immediately following the "fall of Columbus" to Union cavalry forces a Federal lieutenant was detailed to destroy all of the arms and artillery captured within Columbus. The lieutenant, realizing that this would be an extensive undertaking, ordered his soldiers to discard all small arms (rifles, pistols, swords) into the Chattahoochee River, south of the original Fifth Street bridge. The lieutenant also ordered his detail to "roll" all cannon and caissons or limbers into the river, including those cannon still in the manufacture or assembly stage.

In the late 1960s, when the Chattahoochee River was being dredged in the vicinity of the ironworks, the resting place of the cannon was located. Only the "tubes" were found and the location information was forwarded to the Columbus Museum and to the Phenix City Historical Society. (Both organizations have kept the location confidential ever since.) At the time of my departure from Columbus in September 1980, the Phenix City Historical Society had not yet acquired the funds to raise any of the cannon.

I have retained my research files concerning "the Forts of Columbus" and anyone who is interested in additional information may contact me at 1131 Crestview Street, Reynoldsburg, OH 43068.

DUNCAN M. THOMPSON, SR.
LTC, Infantry

POSTAL REGISTRATION

1. **Date of Filing:** 30 September 1988.
2. **Title of Publication:** INFANTRY.
3. **Frequency of Issue:** Bimonthly.
4. **Location of Known Office of Publication:** U.S. Army Infantry School, ATTN: ATSH-I-V-M, Fort Benning, GA 31905-5593.
5. **Location of Headquarters of the Publication:** U.S. Army Infantry School, ATTN: ATSH-I-V-M, Fort Benning, GA 31905-5593.
6. **Publisher and Editor:** Albert N. Garland, INFANTRY, P.O. Box 2005, Fort Benning, GA 31905-0605.

ROAD MARCH STANDARD

Regarding Captain Martin N. Stanton's letter on foot movements in INFANTRY (July-August 1988, pages 5-6), EIB stands for *Expert* Infantryman's Badge. *Everybody's* Infantryman's Badge is the blue cord.

Before being assigned to the 75th Ranger Regiment, one of today's elite Army units, every soldier has to qualify by successfully completing a 12-mile road march in three hours with a 35-pound rucksack, loadbearing equipment with two canteens, steel pot, and M16 rifle. The purpose of the march is to test not only the soldier's physical condition but also his will to give "100% and then some."

A leader who cares for his troops trains his soldiers to meet set standards. He does not help them to get a badge by convincing others to lower those standards. Captain Stanton's experience of watching the loss of control on road marches was not due to the speed of the march. It was due to that unit's lack of understanding of the mundane aspects of troop leading procedures. In addition, how many officers and NCOs made sure corrective training was conducted with the soldiers they saw do the rucksack flop?

While EIB training is conducted at

the squad level, it is an individually tested skill. When testing for the Expert Infantryman's Badge, I saw most of the Rangers complete the run in about two-and-one-half hours or a little more. All of the Rangers tested made the three-hour limit. The 12-mile road march in three hours without a rucksack was simply a conditioning exercise. All they had to do was put one foot in front of another and breathe.

If I would make any recommendation to the EIB Board, it would be to make the EIB a conditional badge and the 12-mile road march in three hours one of the mandatory annual tests to keep EIB certified.

MICHAEL P. O'ROURKE
SGT, U.S. Army
Fort Myer, Virginia

MORTARS IN URBAN COMBAT

Reference Lieutenant Richard F. Steiner's article "Mortars in Urban Combat" (INFANTRY, May-June 1988, pages 42-44), I am glad to see that the programs and developments that I began in the Berlin Brigade in 1979 are still being pursued (see "Indirect Fire in MOUT," INFANTRY, March-April 1982, pages 11-13). But a number of the lessons are being forgotten or ignored.

The discussion of engaging targets in buildings fails to take into account the different types of structures found in urban areas. The principles of target engagement in suburban single-story structures, strip shopping areas, industrial parks, high-rise apartment complexes, and skyscrapers will vary a great deal because of the different types of construction of the individual buildings and the location of neighboring construction. The interaction of the complex variables of construction material, angles of fall, direction of flight, and target location within the structures must be taken into account.

In target planning, the use of major street intersections for target reference points (TRPs) follows traditional fire planning guidelines while easing the problem of adjusting fire on specific targets. As long as the gun-to-target line is parallel to the major thoroughfare, this allows for the lateral adjustment of rounds into a readily visible corridor so that normal adjustment techniques can put the rounds onto the TRP. From there, accurate shift fire techniques can be used to engage other targets quickly. In the defense, this has the additional benefit of cratering major avenues of approach, thus slowing the movement of armored vehicles and making them more vulnerable.

Another point to be considered is that since most engageable targets will be found in the streets, and most European streets are less than 50 meters wide (building to building), these targets can be engaged effectively by a single gun. This is especially true with mortars because of their high rate of fire. This greatly increases the number of targets that can be engaged at one time and allows for the placement of individual weapons so that they can fire parallel to major high-speed avenues of approach.

Finally, a point apparently missed by all concerned: The large number of toxic and dangerous chemicals used and stored in all types of industrial buildings make accidental chemical warfare caused by indirect fire a very real possibility. When a unit is planning indirect fire in industrial or warehouse areas, the chemical people need to be brought into the planning process to consider the consequences of this type of incidental damage.

The adjustment of tactics and techniques of all weapon systems needs to be re-examined in light of the peculiar circumstances of MOUT. I am glad to see that the Berlin Brigade is still leading the way in this field.

PATRICK J. COYLE
SFC, USAR
Columbus, Georgia

ORDNANCE CORPS AFFILIATION

The Ordnance Corps Certificate of Affiliation is ready for distribution to all Ordnance soldiers. A large portion of these soldiers do not receive this information, however, because they are not in Ordnance units. The largest number are the organizational mechanics who work in infantry units.

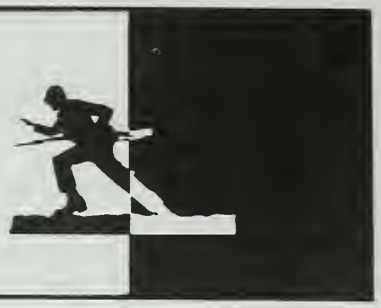
To be eligible to receive a certificate, a soldier must hold an Ordnance MOS or area of concentration. All Ordnance commissioned officers, warrant officers, and enlisted personnel are eligible to receive certificates.

Beginning in the first quarter of Fiscal Year 1989, certificates will be issued by schools awarding MOSs or AOCs; therefore, units only need to request the number of certificates for soldiers currently in them.

Requests for certificates must be consolidated at battalion level or higher and forwarded to: Office Chief of Ordnance, ATTN: ATSL-O-S, Aberdeen Proving Ground, MD 21005-5201. The following information must be included in the request: name of unit, UIC, military address, point of contact, telephone number, and number of certificates required.

DWIGHT E. HAIR
COL, Ordnance
Chief of Staff
Office of the Chief of Ordnance

INFANTRY NEWS



THE CMF 11 SQT DATE is now 1 April 1989. A news item in INFANTRY's July-August 1988 issue (page 7) said the date had been moved to June 1989, but this was incorrect.

THE 1988 SKILL Qualification Test (SQT) scores for Career Management Field (CMF) 11 indicate that this was a demanding evaluation.

TRADOC Regulation 351-2 and Change 1 to it prescribe the format and content of the SQT and its associated study notice: The test must be of significant length; it must be performance oriented; it must contain more plausible distractors (wrong answers); and the tasks to be tested must be randomly selected.

The 1988 Soldier's Manuals, which have been distributed to the field, differ from previous Soldier's Manuals the Infantry School has published. Now, there is a single CMF 11 basic task manual (STP 7-11 BCHM 14-SM-TG) for all 11B infantry soldiers at all skill levels, plus three MOS-specific manuals—11C, 11H, and 11M—that contain only the mission or equipment tasks for each of the three MOSs. The 11C, 11H, and 11M manuals do not contain the basic tasks.

This means that an 11B soldier would need only the 11B manual to prepare for the SQT, while an 11C soldier would need two manuals—the 11B manual for his basic tasks and the 11C manual for his MOS-specific tasks.

Before the 1989 SQT is made final, samples of it will be tested in the field. Information from this sampling will be used to establish the task training standards and the minimum passing score for the test.

The SQT notice is sent out at least 60 days before the beginning of the test window. Upon receipt of the notice, soldiers should begin to prepare to take the test. The notice will reflect by title and number the tasks that will be subject to testing. In accordance with the TRADOC regulation mentioned above, the list of tasks will contain 50 percent more tasks than will actually be tested.

By concentrating on the Soldier's Manual tasks that are listed in the notice, infantry soldiers will be well prepared to take the test.

THE RESERVE COMPONENT Force Integration office, a new office in the Directorate of Training and Doctrine, U.S. Army Infantry School, has the sole mission of integrating Reserve Component (RC) concerns into infantry training and doctrine. It serves as the single source point of contact for all RC units on matters concerning RC training and doctrine.

Questions or concerns regarding problems for RC infantry units should be directed to MAJ William S. Godwin, AUTOVON 835-7625 or commercial (404) 545-7625. The mailing address is Commandant, U.S. Army Infantry School, ATTN: ATSH-I-V-RCFI, Fort Benning, GA 31905.

THE NATIONAL INFANTRY Museum has provided the following notes:

Work has begun on reorganizing and reworking the Museum's displays, and the first phase should be completed by the end of the year. This phase includes an exhibit showing the U.S. Infantryman in Colonial America and the Revolutionary War.

The exhibit will include some artifacts not shown previously. Among them is a linen shirt that was part of the "uniform" of Private Stephen Robbins of Lexington, Massachusetts, a member of Captain Adams' company of militia when it was called to duty with the 1st Middlesex County Regiment. Only 18 years of age at the time, he served on the Roxbury Line in the Battle of Dorchester Heights on 4 March 1776, and with Colonel Willard's regiment at Ticonderoga.

Other pieces in the exhibit include uniforms, weapons, and accoutrements of the period. The printed narrative interpretation for the exhibit is attractively done, using the silk screen process on large panels.

The Museum arranged a special display in honor of Major General Kenneth C. Leuer, Post Commander and Chief of Infantry, on the occasion of his retirement on 31 August 1988 after more than 32 years of service. Major General Leuer will be remembered for his emphasis on training and his advancement of the One Infantry concept.

Another special exhibit shown at Infantry Hall recently was one in recognition of POW/MIA Week. A film was part of the display, which was intended to portray some of the horrors endured by a large number of our armed forces in every war in which this country has fought.

A permanent display was designed by Museum personnel for the J. Lawton Collins Training Center, which was recently dedicated at Fort Benning. Artifacts for the exhibit relating to General Collins' distinguished military career were generously provided by the Collins family. They include medals and decorations and a handsome oil painting.

General Collins was at Fort Benning from 1925 until 1931, first as a student at the Infantry School and then as an instructor in weapons and tactics.

The Collins Training Center was built to house the 29th Infantry Regiment headquarters as well as all resi-

dent instruction on the Bradley Infantry Fighting Vehicle for the U.S. Army Infantry School. It is a $10.7 million, 92,000 square foot facility. About 4,000 soldiers are expected to train in it each year.

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the Museum with financial and volunteer support, is open to anyone who is interested in joining. The cost is $2.00 for a one-year membership or $10.00 for a lifetime membership.

Additional information about the Museum and the Society is available from the Director, National Infantry Museum, Fort Benning, GA 31905-5273; AUTOVON 835-2958 or commercial (404) 545-2958.

AN ADD-ON BUMPER to augment the basic short bumper of the HMMWV (high-mobility multipurpose wheeled vehicle) has been designed at Fort Stewart, Georgia. The bumper provides added resistance against unyielding obstacles (such as the pine trees at Fort Stewart) that a HMMWV driver might encounter.

Before and After

Called the Victory bumper (for the 24th Infantry "Victory" Division, which it will serve), it can easily be installed by the units receiving the HMMWV. The bumper kit includes the materials, along with easy-to-follow instructions, necessary to install the bumper between the original bumper and the vehicle.

Made of six-inch channel iron, the seven-foot piece is reasonably inexpensive to manufacture. Each vehicle can be outfitted for less than $70.

An extra feature that comes with the bumper kit is a set of marker staffs that attach to the ends of the extended bumper to help the HMMWV's driver judge distances. At 86 inches across the body, the HMMWV is 10 inches wider than the Army jeep it is intended to replace.

A SINGLE FUEL for the Army and the other services is a step nearer. A recently published DOD directive states that the primary fuel for land-based air and ground forces in overseas theaters will be JP-8.

JP-8 is a kerosene-type aviation turbine fuel that can be used in both aircraft and diesel-engine-driven ground equipment. It can therefore be used in place of both JP-4, a naphtha-based aviation turbine fuel, and DF-2, a diesel fuel used in tactical vehicles and support equipment. This reduces the number of fuels on the battlefield from three to two.

To further reduce the number of battlefield fuels from two to one, the directive dictates that no new equipment designed to use gasoline-type fuels should be acquired, except for equipment that is not intended for deployment or use outside the United States. And through force modernization, the Army is replacing gasoline-engine-driven equipment with diesel equipment.

Converting to JP-8 will improve tactical flexibility by allowing combat commanders to refuel both aircraft and ground vehicles from the same refueler, should the need arise.

JP-8 is safer to handle than JP-4 and cleaner burning than DF-2. The use of JP-8 will also further NATO interoperability, because all NATO nations have agreed to convert from JP-4 to JP-8 for land-based aircraft.

THE U.S. ARMY INFANTRY Board has submitted the following item:

90mm Recoilless Rifle, M67A1. The M67 90mm recoilless rifle is the primary antiarmor weapon of the 75th Ranger Regiment. Because of its length, the M67 must be dropped as a door bundle during airborne operations. This separates the weapon from its gunner and creates what could be a critical delay in its employment.

In an effort to correct this problem, the overall length of the M67 has been reduced by 10 inches, and the modified weapon has been designated the M67A1.

Additionally, the parachutist's adjustable individual weapon case, M1950, has been modified to accommodate the M67A1, and the U.S. Army Natick Research, Development, and Engineering Center (NRDEC) has developed rigging procedures to permit a gunner to jump with his weapon attached.

On 18-19 July 1988, the Infantry Board conducted a test to confirm the effectiveness of the proposed rigging procedures when used by an individual parachutist to jump with the M67A1 recoilless rifle. A total of 45 jumps

were made from U.S. Air Force aircraft by 24 parachutists from the Infantry Board, the 75th Ranger Regiment, and the Infantry School.

The jumpers carried typical combat

equipment, prescribed by the 75th Ranger Regiment, including the M67A1, during both day and night jumps. The functioning of the weapons was checked before and after each jump. Human factors and safety data were collected throughout the test.

Additional modifications to the M1950 weapon case may be required, and the Infantry School has proposed that NRDEC reconsider the existing procedures and modifications.

TARGET SEEKERS for the Fog-M (fiber-optic-guided missile) have been tested at Redstone Arsenal. The seekers were mounted to the belly of a C-131 aircraft that flew at the approximate altitude (250 meters) and speed (200 knots) of the Fog-M while the seekers looked for targets on the ground.

The test evaluated the relative effectiveness of combat versions of the missile fitted with television seekers (which have been used in all Fog-M tests to date) and with infrared seekers. Two seekers of each type were mounted underneath and toward the front of the aircraft. They were evaluated for their ability to find various targets such as tanks, armored vehicles, and stationary and hovering helicopters under simulated battlefield conditions that included smoke screens. Present plans are to field the system with a mix of both types of seekers.

A Fog-M firing unit participated in the test. By way of a radio link to the aircraft, a soldier manning it from a mountain-top vantage point could see the same images as the seekers.

Fog-M is a non-line-of-sight candidate weapon for the Forward Area Air Defense System, but it also has antitank capabilities.

In flight, the Fog-M pays out a glass fiber that transmits instant, jam-proof pictures to a ground station where a gunner, seeing exactly what the seeker sees from the air, simply locks onto the target with a hand controller and presses a button that makes the missile fly automatically to the aim point.

With Fog-M a soldier can fight without exposing himself to hostile fire; for example, he can fire the missile over a hill to find and kill a hidden tank or a hovering helicopter.

A NEW PORTABLE SATELLITE communications system allows soldiers to communicate between two points anywhere in the world. It includes a manpack radio set and a vehicular net control system. The vehicular net control station can serve several manpacks simultaneously and can be used as a command post.

Designed for light quick-response units, special operations forces, and soldiers with a long-range reconnaissance mission, the system provides a satellite communications network for units down to company, squad, and detachment level.

Soldiers can carry the system, enjoy increased range, and use certain high-speed transmission features that will protect them from enemy radio direction-finding efforts.

The battery-operated radio has an attachable keyboard to send data by "burst" transmission or voice communication. The system is protected against eavesdropping or jamming and is capable of ground-to-air communications.

THE ARMY IS CONTINUING its efforts to provide its soldiers with the best possible camouflage systems.

In addition to the four-color woodland camouflage battledress uniform worn by soldiers today, equipment such as rucksacks, cold weather clothing, and items that are large enough are also provided in the camouflage print. In addition, there is a separate uniform for desert use, and a white garment and equipment covers for snow camouflage. (The woodland camouflage provides an added advantage by protecting its wearer from detection by near-infrared devices such as the starlight scope.)

A new desert camouflage battledress is under development that has an improved pattern and color scheme. The objective is to produce one desert pattern and color scheme that is compatible with the most important strategic desert areas in the world.

Camouflage patterns and color schemes are also being developed for urban terrain. The challenge for urban terrain is similar to that of the desert in that the color of terrain types is so varied.

One of the Army's latest camouflage developments—the individual camouflage cover, which protects against detection in woodland, desert, and snow—was recommended for type classification at a recent clothing and equipment board meeting.

Army commanders are also concerned with combining camouflage with other forms of protection. Thus, there is a new technology that facilitates printing the woodland camouflage pattern on Nomex material. Nomex is used for fire protective clothing. Camouflaged Nomex material will be incorporated into future battle dress clothing, cold weather ensembles, and chemical protective suits. Additional work includes combining camouflage with chemical, ballistics, anti-static, and environmental protection.

REVIEW OF ILS (integrated logistics support) for the Bradley was held in August at the Army Logistics Center. The review was prompted by the difficulties of supporting the basic models and the "A1" variants of the M2 and M3 Bradleys now in the field and the programmed introduction of the "A2" models later this year.

The review process is a continuing one, and soldiers who operate or maintain the Bradley are invited to participate. Their observations may be sent to Commander, Army Logistics Center, ATTN: ATCL-MGM, Fort Lee, VA 23801-6000, or they may call AUTOVON 687-3655/4136 or commercial (804) 734-3655. A 24-hour telecopier may also be used—commercial (804) 862-4829.

PROFESSIONAL FORUM

IET Company XO

LIEUTENANT RICHARD M. WRIGHT

During the past few years a number of articles have appeared in INFANTRY concerning the duties and responsibilities of the company executive officer (XO) in a regular TOE unit. (See, for example, Major Walter A. Schrepel, "Training the Company XO," January-February 1988, pages 19-22; Captain William B. Crews, "The XO as 2IC in a Light Infantry Company," July-August 1987, pages 38-39; and Captain Samuel J. Padgett, Jr., "HHC Executive Officer," November-December 1985, pages 15-16.) But no article has addressed the duties and responsibilities of the XO of an initial entry training (IET) company.

The executive officer of an intial entry training company either influences or is concerned with almost all of the company's activities. Because of this extensive role, he is in a position to contribute directly to the company's success, or to its failure.

Initial entry training is 13 weeks in duration and is divided into five phases. The XO is deeply involved in planning for the support of all five phases.

Phase I. In this so-called soldierization phase during weeks one and two, the XO first ensures that each soldier has his initial clothing issue when he arrives from the Reception Station. Then he directs and coordinates the issue of linen and TA-50 equipment.

The XO teaches classes that help the soldiers master the basic skills and understand what it means to be soldiers. These classes include subjects such as the responsibility of the soldier, the roles of the U.S. Army and the Infantry, the Geneva and Hague Conventions (Law of War), rape prevention, and Subversion and Espionage Directed Against the U.S. Army (SAEDA).

The XO also participates in the company's physical fitness program so that he can evaluate the soldiers for potential physical problems.

Phase II. During weeks three to five, the IET soldiers are introduced to the M16 series rifle, battlefield survival skills, and individual tactical skills. The XO is reponsible for procuring maintenance supplies and performing organizational maintenance.

The soldiers receive their Class A uniforms during this phase, and the XO must coordinate with the Clothing Initial Issue Point to see that this is accomplished in a well-organized manner.

Phase III. This phase, weeks six through eight, consists of weapons training and the mid-cycle test (MCT). The XO must obtain the training aids, equipment, and ammunition called for by the test program. Without these items, the soldiers cannot fully prepare themselves to perform the test successfully.

Following the MCT, the company sponsors a family day for the soldiers and their families.

Phase IV. This phase, weeks nine through eleven, consists of MOS-specific training, and the XO is responsible for procuring training aids for each MOS. In an infantry IET company, six military occupational specialties are taught (11B—Infantryman; 11BC2—Light Antiarmor Infantryman; 11C—Indirect Fire Infantryman; 11H—Heavy Antiarmor Weapons Infantryman; 11HE9—ITV Infantryman; and 11M—Fighting Vehicle Infantryman).

During this phase the soldiers spend most of their time in the field at various bivouac sites, depending on the MOS for which they are being trained. The XO may have to support as many as five bivouac sites at one time with such items as communications equipment, personal hygiene articles, ice, field feeding (meals), and seasonal support pieces. During these bivouac periods, the administrative offices are "moved" to the different sites to be

close to the soldiers they support.

Phase V. This phase, the culmination of the previous 11 weeks, consists of the end-of-cycle test (EOCT), the field training exercise (FTX), outprocessing, a "super supper," and graduation. The XO coordinates and acquires the training aids and the ammunition needed for the EOCT and the FTX. He is also the driving force behind the logistics, intelligence gathering, operations, and training program for the FTX.

During the FTX, the XO serves as both the opposing forces (OPFOR) leader and as an evaluator. As the OPFOR leader, he controls a force as small as two or as large as 50 soldiers, depending on the scenario. He also serves as an evaluator during platoon missions and squad tactical exercises. An exercise lane tests each squad's reaction and its use of the six dismounted squad battle drills, depending on the situation.

The FTX is the most logistically demanding phase of an IET cycle. When the FTX has been completed, the XO supervises the cleaning and maintenance of all the field equipment to ensure that it functions properly and to prevent unnecessary downtime.

The finale of the cycle is the super supper and the graduation. Because the public and the families of the graduating soldiers are present, it is important for both events to be successful. The XO is the primary organizer and executor of the supper, which is like the MCT family day. Occasionally, he is also designated as the officer in charge of the graduation, with responsibility for the procurement and placement of the displays and the reception items.

INTERACTIONS

To accomplish his duties successfully throughout a cycle, the XO must interact with many people. First among these are the drill sergeants. They are tactically and technically proficient in training IET soldiers, and the XO can gain a great deal of knowledge from them. Coordination between the drill sergeants and the XO allows the XO to monitor the needs of the individual soldiers and of the company as a whole. This includes ensuring that the health and welfare of the soldiers is at its best so that the soldiers can perform the required tasks within the designated standards. The drill sergeants also aid the XO by maintaining the barracks.

The XO must also interact with the staffs of the battalion, the brigade, and the Infantry Training Center (ITC). Within the battalion, he must work with his fellow company XOs, the battalion XO, the Personnel Administration Center NCO (S-1), the Training Management Activity NCO (S-3), and the logistics NCO (S-4). These are the key individuals he can turn to if he cannot find an answer to a particular question.

At brigade level, the XO interacts with all the principal staff officers and NCOs. He spends more time with the S-1 and the S-4 than with the others, because these two staff agencies conduct assistance visits (after direct coordination with him) to help him maintain excellence in his administrative and logistical areas.

At the ITC level, the XO usually deals only with the S-3 office, because all of the company's requests for training cycle support pass through this office.

But probably his most important interaction is with the first sergeant and the company commander. Like line company XOs, the IET company XO acts on behalf of the company commander and still has all of his other duties to juggle. The first sergeant can be of tremendous assistance in maintaining the company's administrative areas at their best. With the XO and the first sergeant working together as a team, the company commander's administrative burden is reduced and he can concentrate his energies on the company's primary mission—training soldiers.

The relationship between the company commander and the XO is closer than in most TOE units, and each is dependent on the other. In fact, it is not too much to say that the success or failure of an IET company happens as a direct result of that relationship.

The XO can also be classified as *the* company staff officer since he handles all matters pertaining to administration, intelligence, training, and supply. Perhaps the most important staff action the XO performs is the preparation of the cycle support package. This package contains each cycle's requests for aircraft, ammunition, equipment, personnel support, training areas, and weapons, and is submitted 10 to 12 weeks before a cycle is scheduled to begin.

TRAINING SUPPORT

At the same time, the XO must ensure that all facets of training and training support are accomplished in conjunction with established standards, range operating schedules, training aids acquisition requirements, dining facility support schedules, and transportation schedules. He also makes certain that the support personnel plan ahead to meet the upcoming training requirements.

He is primarily responsible for the operation of the supply and arms rooms and for monitoring the activities of the dining facility. To assist him in these tasks, he has a supply sergeant, an armorer, and a dining facility manager. If the company does not have an armorer, then the XO and the supply sergeant must share this responsibility.

An IET company has another important mission, that of evaluating U.S. Army Reserve units during their annual training. This training is conducted through a system referred to as Reserve displacement, which allows a Reserve company to operate an IET company for a two-week period. During this period, the Active Army cadre members evaluate the Reservists on their performance. The XO is responsible for evaluating the Reserve company XO, supply sergeant, armorer, and other support personnel.

The XO is often humorously referred to as the "additional duties" officer, because he must execute a

large number of additional duties, including, on occasion, serving as an investigating officer in formal investigations. Unlike line companies, where four or five lieutenants perform the additional duties, the IET company XO must manage all of those duties by himself. He must also ensure that all reports, many of which are associated with his additional duties, are properly processed by their suspense dates.

With all of these responsibilities, an IET company XO must be a highly versatile officer who can oversee a variety of activities. It is not a job for the faint-hearted. But if he does his job well, he will have the satisfaction of knowing that the soldiers his company has trained are some of the finest infantrymen in the world.

Lieutenant Richard M. Wright is an IET company executive officer in the 2d Infantry Training Brigade at Fort Benning. A 1986 ROTC graduate of Columbus College in Georgia, he has also completed the airborne and Ranger courses.

Light Infantry TOW Platoon

LIEUTENANT ALLEN L. TIFFANY

One of the most troublesome debates on the light infantry division centers on the seemingly diametrically opposed problems of increasing the division's firepower and conforming to the requirement that it fit on 500 aircraft sorties. So far, most suggestions to "up-gun" the division favor adding weapon platforms of some kind to the light division's table of organization and equipment (TOE). Such additions, obviously, would add significantly to the number of sorties required to move the division. To further complicate the challenge, any change would have to be supported at the battalion level by the present austere support and supply structure.

In the context of the division's world-wide deployment mission, I believe its most vulnerable point is its antiarmor capabilities, and this is where an improvement in firepower can be made.

Unfortunately, with the great amount of night vision equipment, squad level communication gear, and squad level weapons—including the recent arrival of the M249 machinegun (also called the SAW, or squad automatic weapon)—the light infantryman already has about all he can carry.

But what of the other platoons in the battalion? The scouts are as overloaded as the infantrymen in the line platoons, if not moreso, and the mortar platoon is appropriately tailored for its job. That leaves the antitank (TOW) platoon, which currently has six HMMWVs and 16 men, including the platoon leader (see Figure 1). Five changes in this platoon's structure, implemented collectively, would greatly improve the lethality, survivability, and adaptability of the platoon and thereby of the division as a whole:

- Replace the TOW platoon leader's command HMMWV with an M966 TOW HMMWV with a three-man crew.
- Equip each TOW HMMWV with an M60 medium machinegun with a tripod and a turret-mounted pintle.
- Equip one man in each squad with an M203 instead of an M16.
- Add an AN/GRC-160 radio to the platoon leader's vehicle.

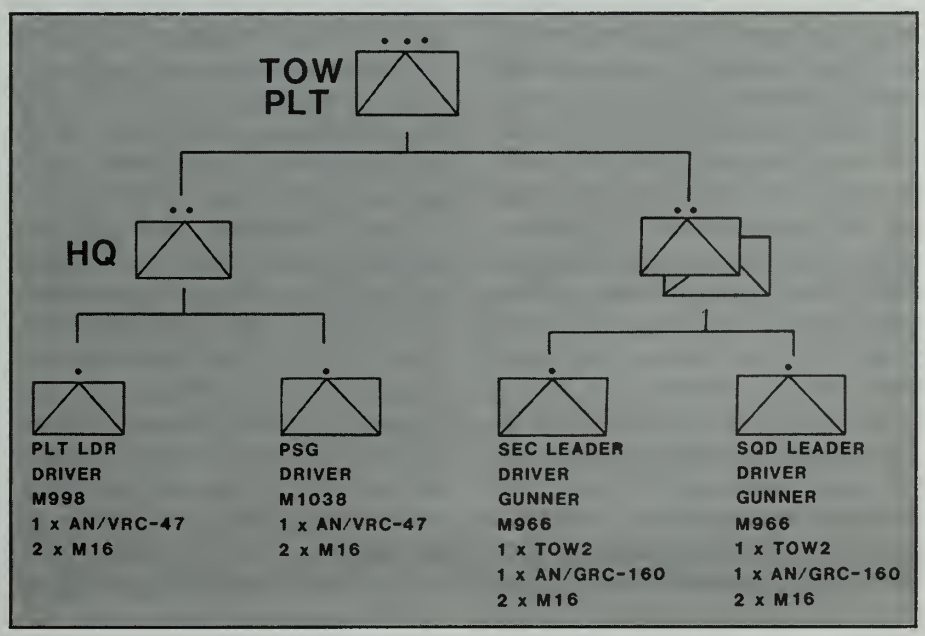


Figure 1. Current TOW platoon TOE (selected components).

• Add either an AN/VRC-47 or an AN/GRC-160 to each of the section leaders' vehicles.

Specifically, these changes (reflected in the revised TOE in Figure 2) would improve the performance of the TOW platoon in carrying out three of the missions it is expected to execute—heavy antiarmor defense, anti-infiltration detection and defense, and convoy escort.

In addition to giving the platoon leader the armor protection of the M966 TOW HMMWV, there are three good reasons for changing his vehicle. The first is rather obvious and simple, but it is also the strongest argument for such a change: When the TOW platoon "flies away" as part of its light infantry battalion, it does so with six vehicles and a trailer. Only four of these vehicles carry a weapon system, specifically a TOW. Why not increase that ratio to five out of six to give the battalion more antiarmor punch?

Since the TOW platoon leader's vehicle normally occupies a battle position anyway, why not make it a vehicle that can add to the fight? And since the current M998 command vehicle has no physical attribute that particularly lends itself to command, it is reasonable to assume that a platoon leader can control his TOW platoon just as effectively from an M966.

Certainly there would have to be a careful review of TOW platoon tactics to define the proper role of a platoon leader operating from a gun vehicle. A comparison to the traditional tank platoon, in which the platoon leader commands not only his platoon but also his own "command" tank in a "light" and "heavy" section configuration, may also be in order. Other questions such as when, how, and under what conditions the platoon leader's squad would open fire, among others, would need to be addressed.

There would be other advantages as well to such a change. The night sight that would be available for the platoon leader's use while he was in an M966 would greatly increase his understanding of actions on an armor kill zone (AKZ) at night and during times of limited visibility. Currently, the TOW platoon leader depends upon reports from his sections and squads to give him a picture of this activity. Although the current system is not a bad one, it is not as good as the one that could be available with the proposed change.

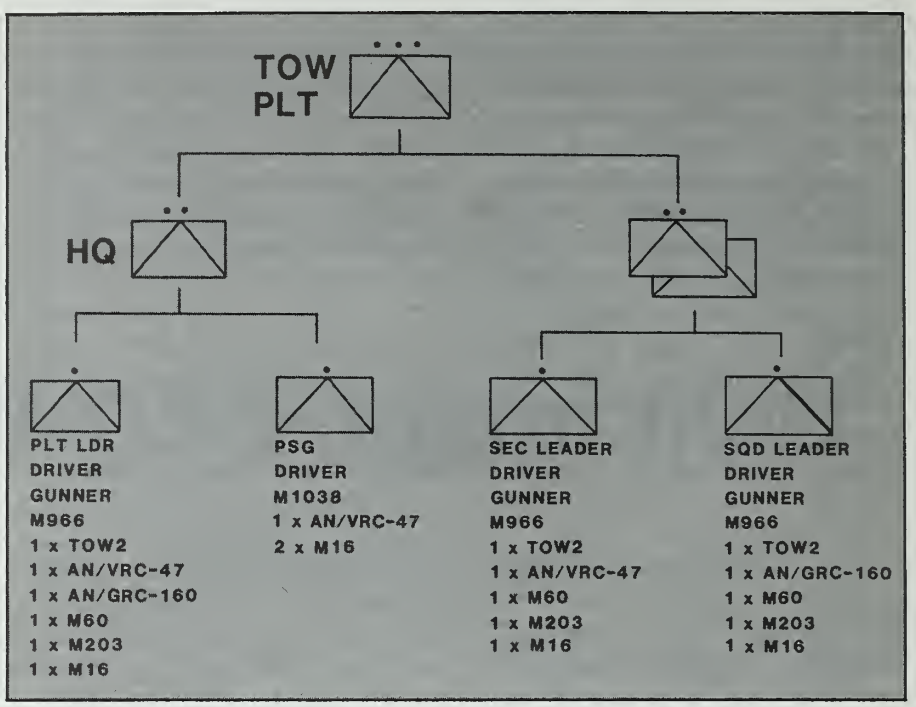


Figure 2. Proposed TOW platoon TOE (selected components).

Equally important, giving the TOW platoon leader an M966 and crew would provide him with enough manpower to accomplish all the required tasks. Currently, to maintain security at night, the platoon leader has two options—rely on himself and his driver or co-locate with a gun—neither of which is satisfactory. In the first, neither security nor radio watch can be done adequately by one man; in the second, the extra vehicle traffic increases the chance that a gun position will be detected by the enemy.

Three men on the platoon leader's vehicle would allow for a rational division of labor. The platoon leader could see to his own unique tasks such as writing operations orders without also having to man the radios, keep an eye on a kill zone, and pull local security while allowing his driver to get some sleep.

The obvious question at this point is, "Where does the extra man for the platoon leader's vehicle come from?" The simplest and best answer would be to add one 11H slot to the platoon, increasing its manning requirements to 17. This would increase each battalion's TOE personnel by one, and the division's by nine.

Some people may believe that an alternate weapon system mounted on the command HMMWV—such as the Mk 19, the M2, or even the 25mm cannon—would augment the TOW platoon more effectively than an additional TOW. But since none of these weapon systems is currently found in the light infantry battalion (or even brigade), their support and supply requirements preclude their consideration.

The second change, equipping each TOW HMMWV with an M60 medium machinegun with tripod and turret-mounted pintle, would help negate the current lack of automatic firepower available to the TOW squads. In part due to the dynamics of the light infantryman, who is foot mobile, and the TOW HMMWV, which simply cannot carry more than five men total, the TOW squad often finds that it must provide for its own security. Mounting a medium machinegun along with a mounted TOW system is feasible, and it would go a long way toward correcting some of the major short-falls the TOW squads and platoons cur-

rently face.

The M60 is recommended over the M249 for several reasons, but primarily because of its longer range and more powerful ammunition. The M249, though lighter and thus preferable for dismounted operations, does not have either the range or the ability to penetrate hard targets that the M60's 7.62mm rounds have.

With only the three M16s a TOW squad now has, it is virtually impossible to suppress, destroy, or button up targets beyond 400 meters. And, of course, by the time enemy vehicles have come to within 400 meters, the TOW system's effectiveness is rapidly diminishing toward zero. The armor-penetrating ability of the M16 round is only a fraction of that of the 7.62mm armor-piercing incendiary (API) round. And when dealing with soft targets, the TOW platoon is completely incapable of engaging anything beyond the range of the M16.

The combination of the TOW's thermal sight for spotting purposes, the range of the M60, and the power of the API 7.62mm round could form a potent team, especially during anti-infiltration operations.

Another reason for adding a medium machinegun is that the TOW squads (either individually or as part of the platoon) do not currently have an effective weapon with which to protect themselves while moving. Hand-held M16s in the turret or poking out of a window do not make effective convoy escort weapons. A machinegun from the M60 family would also increase the platoon's ability to provide defensive antiaircraft fire.

The machinegun mount would have to meet three criteria: First, it would have to be positioned in such a way as to allow flexibility for both the TOW and the machinegun (whether the SAW or the M60). Second, it would have to be able to provide a stable platform from which to fire. And third, it would have to be built so that either system could be mounted whether the other one was or not; that is, they should be neither mutually dependent nor mutually exclusive.

I think a mount could be developed and placed some 90 to 180 degrees to the left of the present turret ring. The best option might be a mount similar in design to the current TOW mount, the mounting ring of which has a securely welded insert with a pintle base. It would also need a lock-down device that would secure it while mounted. Even mounted to the left of the TOW, however, a gunner might still burn the M60 if he did not take care when he positioned the back of the TOW before firing.

The gunner would be responsible for operating the machinegun while mounted. On those rare occasions when the gun would be more valuable in a dismounted position, the driver would be responsible for its employment.

M203

For the third change, one man in each squad would be issued an M203 instead of an M16. The M203 is a powerful weapon whose high arc trajectory might be of value in firing down slopes (since TOW squads are often on high ground when in the defense) and into other low-lying areas that might not be reached by the essentially flat trajectories of the M16 and the M60 at ranges of 450 meters and less. Certainly, the explosive round of the M203 would be very effective at dispersing approaching enemy troops. And like the turret-mounted M60, the M203 would dramatically improve defense while the platoon was moving.

An additional AN/GRC-160 in the command vehicle would greatly increase the TOW platoon's lethality on the battlefield. The TOW platoon leader often finds that to control his platoon adequately he must locate himself in a postion that has a commanding view of the AKZ and its approaches. Such a location often gives him an opportunity to call for and control indirect fire on the AKZ. The problem is that the platoon leader usually must monitor both the platoon internal net and the battalion command net. Obviously, with only one AN/VRC-47, if he wants to call in fire he must switch one of these off during the battle, and neither choice is desirable.

With both an AN/VRC-47 and an AN/GRC-160, a platoon leader could configure his radios so that the AN/GRC-160 would be on the platoon internal net, the AN/VRC-47 would be on the indirect fire net, and the receiver would be on the battalion command net. This would enable the platoon leader to control his platoon, call for fire, and monitor the battalion command net for incoming calls.

Adding an AN/GRC-160 to the command vehicle would also give the platoon leader a dismountable radio to use in dismounted operations.

For similar reasons, the two section leaders should each have an additional AN/VRC-47 or an AN/GRC-160. The most critical reason, however, for an additional radio unit (receiver or transceiver) for a section leader is unique to section operations: Since a section leader and his squad leader have only one radio in their respective vehicles, they must stay on the same radio net. But when a section is attached to a company to support it, that section leader must then switch to the company commander's command net. This means that to stay in touch with his section leader the squad leader must also switch to the company's command net.

As a result, a company commander may find himself, three line platoons, one mortar section, one Dragon section, and two TOW squads all on the same net. Once the battle is joined, the TOW elements are going to be communicating intensely as the section leader controls fires relative to target reference points and coordinates the lateral bounds of his two guns. Clearly, such a situation could congest the command net to the point of halting coordinated action.

If the section leader had an additional radio, he could monitor the company command net on one radio while controlling his section on the other net, which would be on the TOW platoon's internal frequency. The squad leader would stay on the TOW

platoon's internal frequency.

In addition, such a change would give two other vehicles in the platoon the radio assets to operate as a command vehicle if the platoon leader's vehicle were disabled. As the platoon is now equipped, if the command vehicle is disabled, a section leader with only one radio in his vehicle has to try to run the platoon.

These proposed changes are offered for consideration to the light units already formed and to those to come. Making all five changes would greatly improve the lethality of the TOW platoon and the light infantry battalion, particularly in combating enemy armor formations. Equally notable is that the changes would make the light division more effective in mid- to high-intensity scenarios. And the best part is that all of them could be made within the constraints the division must live with. In such a context, the changes would be virtually "free."

Certainly, there are other ideas that warrant consideration, either building on what is suggested here or addressing other parts of the light division. But one thing is certain—the light infantry division is here to stay. The question is how to improve it to get "a bigger bang for the light infantry buck."

Lieutenant Allen L. Tiffany is scout platoon leader, 4th Battalion, 21st Infantry at Fort Ord. He previously served as TOW platoon leader, rifle platoon leader, executive officer, and S-1 in the same battalion. He is a 1984 ROTC graduate of the University of Kansas at Lawrence.

From HMMWV to Ambulance

LIEUTENANT ROBERT L. PORTER

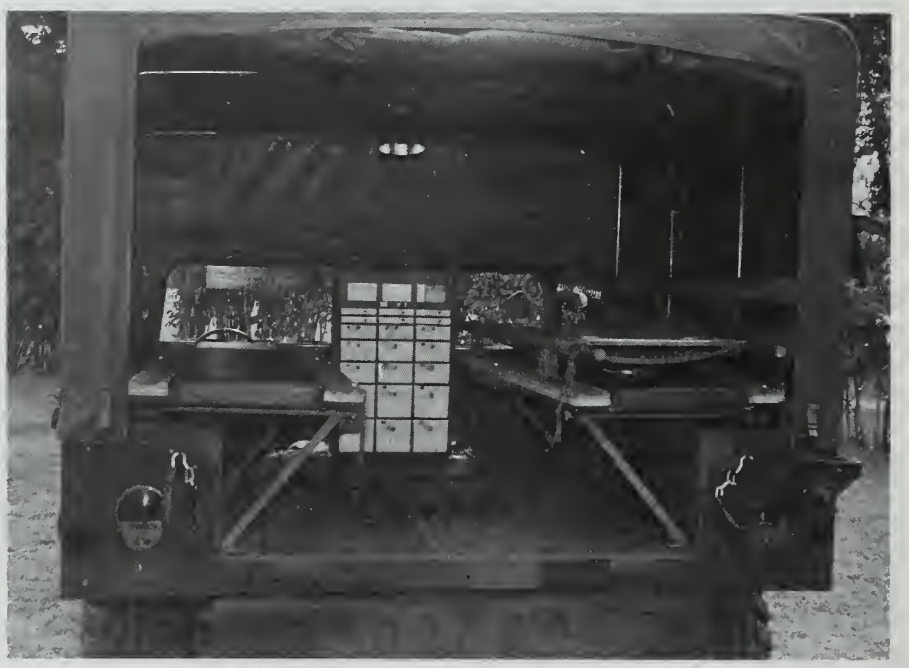
There is little question that the evacuation of wounded and sick soldiers during combat is of paramount importance. For a light infantry battalion, the evacuation problem is particularly acute because it does not have any vehicles with a litter-carrying capability.

Part of the problem is caused by the Army's delay in fielding the M997 HMMWV (high mobility multipurpose wheeled vehicle) ambulance. This delayed fielding, combined with the inability of both the M578 ambulance (gamma goat) and the M718A1 quarter-ton frontline ambulance (FLA) to support light infantry units, inhibits the evacuation of litter patients from a battlefield environment.

One solution to this problem was found by my unit, the 4th Battalion, 87th Infantry, 25th Infantry Division. Using some creativity and $235 worth of locally purchased and supply-channel materials, we created a HMMWV FLA that provides the same capability as our previous FLA; with a minimum of work the vehicle can be easily changed back to its cargo-carrying configuration. When the modified vehicle was tested during the battalion's external evaluation at Fort Hunter Liggett, California, it performed superbly in both capacities.

In order to do this, we made four modifications to the vehicle:

- First and foremost, the bottoms of the troop seats on each side were replaced with modified seat/gurneys. The gurneys were equipped with pad-



HMMWV converted to frontline ambulance.

HMMWV ambulance with one gurney in "up" position.

ded centers (for ambulatory patients) and mahogany rails on which litters could slide. Litter straps and brackets like those in M1010 ambulances were used to stabilize the litters during transport.

• Extended platform braces were fabricated from three-quarter-inch angle iron to support the gurneys in the down position. By using the two rear troop seat brackets to support the braces, the gurneys could be stored in the "up" position parallel to the backs of the troop seats when the vehicle was used to haul cargo.

• A load-bearing bar was constructed of two strands of three-quarter-inch angle iron to span the width of the HMMWV bed using the forward troop seat brackets. This bar accommodates the extended width of the gurneys and prevents weight from being placed on the dividing wall. It also serves as an anchor point for a medical chest.

• A 24-volt power source was added to the cargo area of the HMMWV to power a small electric fan and a lighting system.

These modifications have been implemented throughout the 25th Infantry Division as an interim solution to the evacuation problem until the M997 is fielded. Even then, the modifications will be maintained to increase the organic litter-carrying capability at battalion level.

As one of the Army's combat-ready light infantry divisions, the 25th is constantly seeking innovative and creative ways to use the equipment it has to improve its rapid deployability and its battlefield effectiveness. This HMMWV modification is one example.

Lieutenant Robert L. Porter proposed the HMMWV modification while serving as the medical platoon leader, 4th Battalion, 87th Infantry, 25th Infantry Division in Hawaii. He is now assigned to the 25th Medical Battalion. He is a 1986 ROTC graduate of the University of Michigan.

PSYOP Units
How to Use Them

LIEUTENANT PETER D. FLAMMING

With their speakers and amplifiers, tactical psychological operation (PSYOP) units look like portable rock concerts, but they don't have to be an infantryman's nightmare of noise. Properly used, they can work for, not against, tactical objectives, and chances are that many exercises will include them in the near future.

Since the Army began a push to improve its psychological operations several years ago, the capabilities of PSYOP units have expanded greatly. This is due largely to the creation of a PSYOP military occupational specialty and the specialized instruction that goes along with it. Unfortunately, though, there is not much information available to infantrymen on how they might use and exploit these units. A brief outline of PSYOP concepts, therefore, should help.

Tactical PSYOP units are composed

of small teams equipped with speaker systems of various wattages. The systems can be vehicle-mounted or man-packed, and they have considerable effective range. Sound effects, messages, and sometimes music can be used to achieve a desired effect.

Psychological operations in a combat role have three main uses—deception, harassment, and, to a limited extent, propaganda.

Because of the nature of tactical PSYOPs, it is axiomatic that a cardinal rule of combat will be broken—a PSYOP unit will give away a unit's position—and this must be considered in all PSYOP applications. That is why, initially, deception should be considered: Deception techniques will not give away a unit's true position, and it will delay the enemy's realization that a PSYOP unit is present.

A mounted speaker team can imitate with surprising accuracy the sounds of moving armor or mechanized infantry, helicopter insertions, or convoys. It is not difficult to plan these deceptions to fit a unit's objectives. For example, a unit can seem to be where it is not, seem to be increasing its strength by moving in armor, seem to be moving its tracks one kilometer from its actual position, or seem to be airlifting in or out. The enemy then has to counter each of these actions or ignore his own intelligence information. In either event, the seed of doubt has been sown, and in a tactical situation, doubt creates hesitation and error.

Even if the presence of speaker teams seems to have been compromised, they can still be effective: A unit that is known to employ speaker teams can use the "cry wolf" theory to mask its true movements. For example, in one of the most successful uses of speakers in World War II, the Germans in late 1944 broadcast the sound of armor movements toward the Allies for several weeks. The sound became so commonplace that when actual units massed along the front in the days before the beginning of the Battle of the Bulge, the sounds they made created no alarm.

DIVERT AND DECEIVE

Speaker teams are not magical, and a unit must be careful in deciding where it wants broadcasts to take place. The best rule of thumb is to divert and deceive the enemy and get him away from the unit's location.

Harassment and propaganda should be used only after a PSYOP unit's presence is known, or in static situations along well established fronts. Although effective deception weighs heavily enough on an opposing force, harassment and propaganda can also have a devastating effect on susceptible troops.

One PSYOP harassment technique is to deprive the enemy of sleep by using random all-night broadcasts. The drawback to this action is that it can also keep friendly troops from getting their proper sleep. Other themes can focus on the needs of the enemy soldier—messages that are preferably basic and blunt. PSYOP units are also capable of creating "custom" broadcasts to fit specific situations.

Although propaganda themes are a complete study by themselves, it should be noted that PSYOP units are well trained in developing propaganda. Propaganda has limited use, however, in small-scale tactical situations, and harassment is more effective.

Tactical psychological operations can work for infantrymen if they give PSYOP units an opportunity and employ them properly. Although a certain degree of prudence must precede such actions, creativity and boldness must also play a role. Infantry units will be pleasantly surprised at just how valuable PSYOP units can be to them on both peacetime and wartime battlefields.

Lieutenant Peter D. Flamming, commissioned in June 1988 from the Texas National Guard OCS, is PSYOP officer, 244th PSYOP Company, U.S. Army Reserve. He is a graduate of the PSYOP Specialist Course at Fort Bragg.

MOVEMENT TO CONTACT AND HASTY ATTACK

CAPTAIN WILLIAM O. ODOM

The ability to conduct a movement to contact and then a hasty attack is the most important collective skill and fundamental offensive task a squad can master. The primacy of this skill is clear if one accepts that movement is an integral part of most operations, that most units will spend more time moving than fighting, and that most attacks, raids, and ambushes require a movement to contact or a hasty attack at some point, usually as a result of unexpected developments. Given the certainty of uncertainty on the battlefield, a unit must be prepared to gain and retain the initiative through offensive action, the core of which is the movement to contact and hasty attack. Training in this task is therefore a top priority.

The observations presented here are based upon lessons I learned from my commanders in the 2d Battalion, 75th Ranger Regiment and then validated for myself during training. These observations are separated into two categories—tactical lessons learned and training lessons learned. Input from an opposing force (OPFOR) is reported where it is applicable.

The tactical observations focus on "how to fight" at individual through squad level with special emphasis on leader tasks. The lessons learned from training relate experiences from hundreds of iterations of movement to contact and hasty attack training, and they provide basic guidelines for the conduct of the training and highlight the benefits and costs of various training options.

These evaluations were conducted under nearly every environmental condition—the jungles of Panama, the savannah of Honduras, the rain forests of western Washington, the hardwood forests of the eastern United States, and the deserts of the Middle East and eastern Washington.

Most of the training was conducted using blanks, MILES training devices, and live fire, or some combination of the three. The squads usually faced two or three situations, at least one of which required the squad leader to request assistance instead of attacking.

The standards for the individual and collective tasks were taken from the existing manuals, primarily ARTEP 7-15, Field Manual 7-8, the Common Tasks Manual, and the Skill Level 1 and 2 Infantry Soldier's Manuals. Inadequate standards were corrected as required. Tasks that were not addressed in the literature of the time, such as "suppress or react to enemy attack," were developed locally.

I found that the manuals do work and that the doctrine in FM 7-8 was validated time and again during the training. The more specific performance measures found in the Soldier's Manuals and the recently published battle drills were good most of the time, but they were not met (and probably could not be met) under certain conditions. For example, thick vegetation almost always prevented squads from identifying and suppressing the enemy within the time standards established in the "react to enemy contact" battle drill. While this observation does not warrant rewriting the task standards, it does emphasize the importance of considering METT-T (mission, enemy, terrain, troops available, and time) in determining whether a unit is trained or needs practice.

Generally, individual actions other than leader tasks were not major contributors to a squad's failure. (The leader tasks were so critical that they will be addressed separately.) By far the most common fatal errors were related to movement under fire. Simply mastering the rush, low crawl, and high crawl is not enough to ensure a soldier's survival. In fact, most soldiers executed the movement techniques well, but the key to success was knowing which technique to use and when to use it. For example, many soldiers completely neglected crawling in favor of rushing when crossing what appeared to be open terrain.

Until terrain is viewed from the prone position, the abundance of cover that might be available to a low-crawling soldier is invisible. The OPFOR confirmed that rushing

soldiers were easier to locate and engage than crawling soldiers. Often, too, soldiers rushed from cover to cover forgetting they were supposed to hit the ground after three to five seconds, because that was the amount of time the OPFOR soldiers usually needed to acquire and shoot at them. The OPFOR soldiers said they collected most of their kills when an attacking soldier rushed for more than five seconds and was getting up from a roll in the open.

If an attacking soldier had rapidly changed direction, ducked, or varied his pace, however, the break would have been enough to disrupt an OPFOR soldier's aim and let the attacking soldier reach cover, even if his rush had been longer than five seconds. (This observation supports the cover-to-cover-rush principle stated in the Common Tasks Manual.)

NEXT POSITION

The selection of the next position became as important as the move itself. The attacking soldiers lived if they selected covered positions that were accessible by covered or concealed routes. If, however, they tried to hide behind vegetation, fired from the same point, or moved from the same place at which they were last seen by the OPFOR soldiers, they were promptly fired on. The OPFOR soldiers quickly learned to follow an attacking soldier and wait for the inevitable peek around a tree.

Although these observations only emphasize the long established basics of movement under fire, the errors continue to be made and require constant correction.

Risking injury or death to recover a key weapon was usually a bad decision. In one exercise, it cost a squad three soldiers. After a SAW (M249 machinegun) gunner was "killed" rolling in the open, first the grenadier and then the team leader unsuccessfully braved OPFOR fire to recover the SAW. This scene was replayed at least twice more during the same evaluation, once with a soldier trying to man the SAW and another time with a soldier attempting to recover an M60 machinegun. A better solution would have been to recover the weapons during consolidation and reorganization.

Communication often hinged on relays from team members, and visual contact proved to be the critical link in squad communication. An individual soldier's primary responsibility is to maintain visual contact with his leader. But he must also maintain contact with his buddy and relay signals in the event visual contact is temporarily lost between the squad leader and the team leader. Once, a frustrated squad leader repeatedly called to a team while a new team member passively lay behind a tree awaiting instructions from his "dead" team leader. The squad leader did not receive the report of the team leader's loss until the squad reorganized on the objective. The squads that understood the importance of visual contact and clear verbal instructions usually succeeded. In others, poor communication left the outcome to team leader initiative, uncoordinated action, and luck, if any.

The importance of the transition from basic rifle marksmanship to its application on a tactical range was highlighted by poor suppressive fire. Suppressive fire ranged from inaccurate, wasteful "mad minutes" to periods of silence caused by an inability to detect the OPFOR.

Suppressive fire involves placing well-aimed shots at known or suspected enemy positions. Initially, soldiers should use the rapid rate of fire until they have attained superiority; then they should keep the OPFOR pinned down by sustained fire until they are signaled to lift or shift their fires.

The inability to provide good suppressive fire is reinforced in training if soldiers are given too much ammunition and if suppressive fire is evaluated by its sound rather than its effect. Previously successful solutions to the problem of ineffective suppression were to count hits on targets or OPFOR personnel, limit the amount of ammunition, and "pay back" soldiers who accomplished the mission with the least expenditure of rounds. (The ammunition allocations shown in the accompanying table are sufficient for three iterations of contact.)

	AMMUNITION
LIVE FIRE	
5.56mm ball	30 rounds per rifle/issued in two 15-round magazines.
5.56mm tracer	102 rounds/issued in two 15-round magazines to each leader and six per M16/issued three per magazine.
5.56mm linked	200 rounds per SAW.
7.62mm linked	100 rounds per machinegun.
HG smoke	3 total, 1 per leader.
Dummy HG w/fuze	18, 2 per man.
40mm TPT	4 rounds per grenade launcher.
Pengun flare	1 set, assorted colors to squad leader.
BLANK FIRE	
5.56mm	30 rounds per rifle/issued in two 15-round magazines.
5.56mm linked	200 rounds per SAW.
7.62mm linked	100 rounds per machinegun.
HG smoke	3 total, 1 per leader.

One day spent on a range demonstrating the effectiveness of a single, well-aimed shot—compared to the relative ineffectiveness of automatic fire—is enough to convince most soldiers of the advantage of quality over quantity. Individual marksmanship varied from good to poor, depending on the quality of a unit's last marksmanship training and the time that had elapsed since that training. The same rules for suppression apply to SAW gunners, grenadiers, and machinegunners.

The most critical leader skills in the movement to contact were the ability to control without overcontrolling and the ability to read the terrain. The squad and team leaders' proficiency in these skills often determined the outcome of an engagement. The mastery of Skill Level 2 tactics enabled most squad leaders to control their squads reasonably well.

The experienced squad leaders were easy to identify,

because most of the others faltered when faced with the surprising difficulty of controlling movement in certain kinds of terrain. Every squad leader could employ various movement techniques, change formations, use hand and arm signals, and take action on contact, but only the seasoned squad leaders could both read the terrain and apply the skills well.

Control when not in contact was usually very good. The location of the squad leader during movement, particularly when bounding, varied greatly. The principle that the squad leader should "be where he can best control the squad" cannot be further refined without being overly prescriptive. Field Manual 7-8 and the Soldier's Manuals are excellent guides for movement. They address most of the considerations for determining the best place from which to control the squad. One consideration not mentioned, however, is the relative strength of the team leaders. For example, a squad leader should consider remaining with his less experienced team leader when in bounding overwatch, because this will probably be the critical point when in contact.

Battle drill provided the immediate response to enemy contact, but the transition from battle drill to the next action—attack, suppress, or move (bypass/withdraw)—was the real test of a squad. Most squads reacted well to enemy contact—taking cover, returning fire, deploying, and reporting in accordance with battle drill. Once in contact, the speed and correctness of a squad leader's actions were heavily based on the reports he initially received, especially those from the team in contact. If he is not with the team in contact or at least in a good overwatch position, communication immediately following the initial contact is critical to success, because it affects the squad leader's decisions for subsequent action.

RELAY SIGNALS

It became even more important for individual soldiers to relay signals when they were in contact. Communication between the squad and team leaders, which is vital to success, was sometimes complicated by reduced visibility from the prone position, vegetation on the ground, and the confusion of contact. The buddy teams had to know the other teams' locations and status and had to maintain visual contact with the team leader in order to follow him and do as he did. Team leaders, of course, had to communicate with the squad leader. If the chain of visual contact was broken, it usually destroyed the squad's ability to maneuver effectively.

Controlling a unit under fire is difficult, but control is a squad leader's most important job in wartime and ultimately the true test of his worth as a combat leader. Once a course of action has been determined, the squad leader directs the actions of his teams using voice, whistle, tracers, smoke, pengun flares, and other pyrotechnics.

Voice commands allow the most flexibility in issuing guidance, but they are limited by the volume of the leader's voice. Arguments against using the voice for fear of identifying the leaders and their locations or giving away the plan of attack are probably not strong enough to warrant the use of a less effective technique.

Most squad leaders preferred to use voice commands, but not all used them well. Common errors included calling out "enemy to my front" (instead of using the hand and arm signal for enemy in sight or firing a weapon); use of names; team members talking more than necessary to communicate with their buddies or team leaders; and moving beyond voice range.

Certain commands were best transmitted by whistle rather than voice because of the distance between teams or the volume of fire at the time the commands were issued. Common whistle commands were "lift or shift fires," "consolidate on the objective," and "special teams, fall out." These whistle commands, the same ones frequently used to control actions on the objective during raids and ambushes, can easily be incorporated into standing operating procedures.

DISTRIBUTE FIRES

The distribution of fires was best accomplished by a combination of tracer fire and voice command. After some experimentation with a variety of mixes, leaders now carry full tracer loads to direct fires. Pengun flares have been used successfully in the past, but it is important that they be a color other than red to prevent confusing them with tracers.

Smoke grenades were generally not well received or well used by squad leaders as a signal or control measure. The smoke was invaluable, however, as an obscurant. Arguments were presented against using it to mark the flank of the moving team and as a signal to lift or shift suppressive fires. Squad leaders agreed that the smoke attracted more attention than it was worth and that it hid the maneuvering team from the suppressing team. The unpredictability of the smoke was also a problem, but this was accepted as a training deficiency rather than as a failure of the smoke grenade itself.

Even though the use of smoke as a marker and a signal was not well received, it was a critical addition when a squad had to cross an open area under fire. For this reason alone, it was deemed wise for each leader to carry one. Other pyrotechnic signals such as star clusters and flares were more than a squad needed for internal communication, but these could be used as part of a platoon communications plan.

Ranger squads, when training at squad level, usually had machinegun teams attached. The most successful squad leaders kept the gun team close to them and exercised positive control through mission-type orders. Thoughts on the employment of the guns were as diverse as the situations in which the leaders found themselves. Whether guns should be in the front, middle, back, or dispersed throughout the formation; whether the platoon leader,

squad leader, platoon sergeant, or weapons squad leader should have a gun; and the timing of their employment were all dependent upon METT-T.

The thread that binds all of these options is the need for a leader to maintain positive control of the gun. If the gun is attached to a squad, the squad leader must control it. Although a good gun team will usually carry on in the absence of orders, it should not have to. The squad leaders who kept the machinegun close to them and gave mission type orders, instead of trying to be assistant gunners, were successful. Guns that were kept in the rear usually had no influence on the action.

The successful execution of leader tasks is clearly the key to mission accomplishment, but the leader alone cannot guarantee victory. Individual actions combine to constitute team and squad actions. If enough individuals are executing their tasks poorly, the unit will fail regardless of how well the leader is performing.

The following observations apply to collective actions:

• Speed killed. Teams and squads that moved quickly when not in contact lost more than one man in the initial engagement. Squads that moved slowly usually lost no more than one man and often sighted the enemy first even though the OPFOR knew they were enroute. Once in contact, leaders who took time to assess the situation and develop a plan, instead of continuing to react, won. Occasionally, the lead team would charge off to slay the enemy without informing the squad leader of the situation. Its members usually became casualties, and were lost to the squad.

Generally, a fire team has no business attacking by itself. If it is engaged without the trail team in position to provide overwatching fires, it should react to enemy contact in accordance with battle drill and provide suppressive fire until the rest of the squad is positioned to support its next move.

In training I have also seen squads automatically attack far superior forces when requesting assistance from the platoon would have been a better solution. If a squad attacked more than two men or any size unit armed with an automatic weapon, it lost at least two men and usually more during the ensuing fight. Whether or not this is acceptable depends on the commander's intent. It was certainly not acceptable during the conduct of the training I observed. A leader's decision to attack before properly assessing the situation resulted from rushing the action.

• The results of numerous contacts showed that the squad that made initial contact from a bounding overwatch formation fared better than those who were in a traveling formation. Squads frequently made their first contact in traveling overwatch, which was acceptable, given the likelihood of enemy contact. But after the first contact, some squads continued to use traveling overwatch instead of bounding. Their justification was the lack of overwatch positions. There were indeed places where it appeared an overwatch position could not be found, but it always paid to look. The most experienced and successful squad leaders did find suitable positions, even though at times the overwatching team had to kneel to see through dense vegetation or stand to see over high grass. The squad leaders who "could not find" good overwatch positions

had limited themselves to seeking positions from which soldiers could overwatch from the prone position.

• Until the objective is physically secured, it must be treated as though it is occupied by hostile personnel. An absence of return fire does not mean the objective is secure, and individuals must always use those movement techniques that limit their exposure. The terrain and vegetation may allow a less exhausting method of approach than continuous crawling and rushing. On-line team rushes—or worse, walking across the objective—can be costly mistakes. These mistakes are usually corrected early in a squad's training, because it is easy for the soldiers to understand the stupidity of this action.

• Consolidation and reorganization were usually rushed and incomplete as leaders unrealistically hurried to continue movement to contact. The squad leaders who realized that reorganization is a slow but vitally important task, and that movement would not continue until reorganization was completed, performed to the standards.

Casualty play, too, demonstrated the lack of realism in the three-minute consolidations and reorganizations conducted by the most eager squad leaders. One litter patient in an exercise often neutralized a squad, because the four litter bearers and the security force required to evacuate the patient left too few men in a squad to do anything.

Although every task in consolidating and reorganizing is addressed in the Soldier's Manuals, METT-T may dictate that some of these tasks be modified. The key to successful consolidation and reorganization is realizing the importance of the task and understanding the time requirements for doing it right.

LCE ADEQUATE

The infantrymen's equipment performed as advertised when it was used properly. Load carrying equipment (LCE) was adequate, though sometimes uncomfortable and cumbersome. A common problem was a failure to buckle the LCE, which caused unnecessary noise and made it difficult for soldiers in the prone position to reach magazine pouches that had swung behind their backs. The soldiers also found that it was smart to carry the magazines with the open side down and with a pull-loop of 550 cord installed in the bottom of each.

The M16A2 performed well all of the time. There were problems, however, with the magazine and drum of the M249 SAW, as well as with its accuracy. The magazine and drum problems are being evaluated, but the accuracy problem has been fixed with the improvement of previously applied modifications to the sights and corrective actions to replace barrels that were "shot out." (See "The M249 Machinegun," by Kenneth D. Martz, INFANTRY, September-October 1988, pages 35-38.)

The M60 machinegun and a well-trained team is still an awesome combination. Even the fairly old guns performed reasonably well. When well employed, the M60 dominated the situation.

It was difficult to evaluate the tactical effectiveness of the M203 grenade launcher because of safety restrictions and the limitations of target practice (TP) ammunition in providing downrange feedback. The TP rounds did allow gunners to appreciate the accuracy of the weapon at short ranges, and most gunners could score direct hits on E-type silhouettes at ranges out to 100 meters. Most gunners preferred to use the leaf sight for the relatively short-range engagements that characterized the movement to contact lanes. The superiority of the quadrant sight is not apparent until distances exceed 150 meters or so.

New gunners quickly learned to appreciate clearance requirements and arming distances as they smacked rounds into overhead branches or obstructing trees and found themselves in a rain of orange marking powder.

The ammunition carrying vest, an important part of the gunner's equipment, worked well. Some grenadiers failed to deploy with the vests, however, and attempted to carry rounds in their cargo pockets or ammunition pouches. It was easy to identify a guilty gunner from the trail of dropped rounds.

HAND GRENADES

Hand grenades are key weapons in a squad's arsenal but are difficult to simulate. Practice grenades or simulators, however, should be carried and employed just as real grenades are. Although many people seem to take it for granted that any soldier can accurately throw a hand grenade, recent training for the Expert Infantryman's Badge has shown that throwing a grenade is a perishable skill that requires practice.

The application of the skill in a tactical environment exposed more weaknesses—failing to carry the grenades by attaching them to the ammunition pouches, failing to warn other soldiers when throwing a grenade, and failing to take cover after throwing one. As with the 40mm grenades, it was difficult to evaluate the effectiveness of hand grenades because of safety restrictions.

Although hard-core infantry leaders believe in the spirit of the bayonet and visualize the combat infantryman making the final assault with bayonet fixed, ready for close combat, fixing bayonets may no longer be a good standing operating procedure. A nine-man squad will have only five soldiers with fixed bayonets—the squad leader, the team leaders, and the riflemen—because the grenadiers and SAW gunners cannot fix bayonets to their weapons. In addition, most squads, in peacetime or on the battlefield, will not be at full strength. If the key weapons are manned, the riflemen will fall out, leaving only three men with fixed bayonets—the squad leader and the team leaders. If only the leaders have fixed bayonets, and considering the high visibility of the new M9 bayonet's shiny finish, it is probably not a good idea to fix bayonets. (Some consideration should be given to modifying the SAW and the M203 grenade launcher to allow bayonets to be fixed on them.)

Aside from the insurmountable safety limitations of the grenades, no problems were experienced with ammunition. As noted earlier, leaders carried pure tracer loads to direct fires and also the attention of the team leaders and members. In addition, each man loaded three tracers at the bottom of each of his magazines to warn him of an impending magazine change. Both techniques worked well.

Finally, the performance of the squad radio, AN/PRC-68, was inconsistent. Some worked better than the AN/PRC-77, but most worked very poorly. Some squad leaders felt this radio was totally worthless and preferred to leave it at home. Others claimed that it did exactly what it was supposed to do—transmit at short ranges with very low power. Only time will tell whether the new squad radio, AN/PRC-126, will be better received.

In addition to the tactical lessons, a number of training lessons were also learned from the collected observations.

Training in conducting a movement to contact and hasty attack focuses on the ability of the squad to close with and destroy the enemy while sustaining as few casualties as possible. The training begins with the supporting individual tasks, with particular emphasis on leader training, and progresses through team to squad training in the dry, blank, MILES, and live fire modes. The training is easy to prepare but extremely time consuming in its execution.

INDIVIDUAL TASKS

The individual tasks that support the movement to contact are listed in the Soldier's Manuals and the Common Tasks Manual. The most important individual skills are marksmanship, hand and arm signals, and the ability to move under direct fire. Depending on the state of the squad members' training, other tasks may also need work. Camouflage, employment of hand grenades, application of first aid, and prisoner of war handling are often deficient.

Leaders need extensive preparation using terrain models and TEWTs (tactical exercises without troops) to teach them "how to think," not "what to think." Leader training should focus on mission orders, fire control, fire discipline, leader actions on contact and during consolidation and reorganization, and communications and control procedures. As the tactical lessons learned have shown, the importance of leader preparation cannot be overemphasized. In fact, it can be counterproductive to allow a leader to fail because of poor preparation.

Collective training should focus on battle drills, consolidation and reorganization, and squad maneuver. For maximum benefit, leaders should limit movement and focus on the fight-through phase.

Once the movement to contact and hasty attack has been identified for training, the collective, individual, and leader tasks have been selected, and support resources have been made available, a training and evaluation (T&E) plan is prepared. The T&E plan describes the following:

- The purpose of the training—Why are we doing this?
- The terminal training objective (TTO)—the task, condition, and standard against which the unit will assess its proficiency at the end of the training.
- The intermediate training objectives (ITOs)—tasks, conditions, and standards that must be trained in order to meet the standard in the TTO.
- The time schedule—about one-third of the available time should be allocated for the after-action review (AAR) and retraining.
- The support requirements.
- The plan for the after-action review—the plan for reviewing the performance of the individuals and the unit in relation to the ITOs and the TTO.
- Opportunity training.

Developing a scenario, a lane, and an evaluation plan to meet the stated objectives of the T&E plan is the next order of business. The scenario should offer no more than three engagements. The following options have produced good training:

- An enemy element of one or two men is encountered while the squad is moving. The enemy element may be a reconnaissance and security team sent out from a patrol base, a sniper team on the move, or two lost souls who have simply wandered into harm's way. In most cases, the squad leader reacts to contact and kills or captures the enemy.
- One or two enemy soldiers are stationary, possibly dug in. They may be in a security position on a defensive perimeter or an observation post/listening post (OP/LP). In most cases, the squad leader reacts to the contact and kills or captures the enemy.
- An enemy element of three to five soldiers with a machinegun is encountered, perhaps a patrol or part of a larger defense. In most cases, the squad leader reacts to the contact and requests support from the platoon leader.

EXPLAIN SCENARIO

For the reasons mentioned earlier, the scenario should be explained in such a way that the squad leader understands that he will probably become the reserve or overwatching squad as the platoon continues to move following the contact. In order to focus on the more difficult task of leading the platoon movement, the squad leader will continue to move following each engagement in accordance with the platoon leader's instructions.

The engagements need not follow a logical sequence. In fact, a squad can too easily become conditioned to routine sequences: for example, facing a sniper, then an OP/LP, and finally a platoon defense. Knowing the sequence of engagements simplifies decision-making and detracts from the squad leader's training.

The lane should be realistic. It should afford cover and concealment, allow for repeated rushing and crawling without injury to knees and elbows, provide maneuver options,

and contain tactically sound objectives.

The lane should be viewed from the enemy perspective when the positions are selected, and its length should be limited so that movement is reduced and the focus is on the hasty attack or "fight-through" phase. A lane in excess of 800 meters is probably too long—the squad will spend more time moving than fighting. (Some of the best training in my unit occurred on a 300-meter lane that contained three engagements.) The training area should include lanes for blank fire training, MILES training, and live fire training. (Additional considerations for lane selection when conducting MILES and live fire training are addressed later.)

An evaluation plan is essential. Without it, the feedback will be unstructured, and neither the soldiers nor the trainers will be able to focus their efforts effectively. The number of tasks for evaluation should be kept to a minimum; like good training, good evaluation must be kept simple. Of course, deficiencies should be noted at all times, but the focus should be on a handful of the most important tasks. The standards for all the individual tasks are found either in the Soldier's Manuals or in the Common Tasks Manual. Inventing tasks or unnecessarily modifying the standards may confuse soldiers. The squad leader is the trainer and evaluator; external evaluators should be limited to one person, preferably the platoon leader or the platoon sergeant.

Marksmanship evaluation is usually neglected during tactical training. The purpose of marksmanship evaluation is to provide the soldier with feedback on the effects of his shooting so that he will understand the importance of firing accurately instead of spraying the enemy.

The transition from linear range firing to applied marksmanship on a tactical maneuver range is a gap in many marksmanship training programs. Knowing when and where to shoot, which is the heart of suppression, is as important as knowing how to shoot.

Range training for a movement to contact and hasty attack is time consuming. Even if a squad has completed all its pretraining, MILES zeroing, and troop leading procedures before range day, the time required to conduct the lane will probably limit the training to three or four iterations per day. Taking the time to do it right, with the emphasis placed on a good after-action review, is the most important consideration in planning the training.

Movement to contact training culminates in a live fire exercise. Since live fire training provides only one-way feedback, though, MILES training should be conducted first. MILES training, by enabling the enemy to shoot back, reinforces the importance of individual movement techniques, selection of firing positions, and camouflage. It keeps leaders from overexposing themselves and, if they fail to learn, allows the unit to practice "fall out one" drills. MILES places a premium on marksmanship as the members of the OPFOR bob and weave to stay alive. The live OPFOR also increases the realism of procedures for handling prisoners of war and for the treatment and evacuation of casualties.

MILES does have some drawbacks. First, vegetation deflects the laser beam and allows concealment to be used as cover. This shortcoming can be overcome, however, by using a control gun to "wound" or "kill" a soldier who is using concealment for cover. Second, no MILES simulators are available for hand grenades or M203 40mm

grenades. Simulating high explosive effects with a control gun is an option, but not an ideal one. Third, if the MILES "zero" is lost, automatic fire becomes more effective than single shots, and thus may reinforce a bad marksmanship habit. When soldiers fire blank ammunition, even with MILES, they are less conscious of their marksmanship and ammunition expenditure. And finally, although this is not generally the case, the soldiers' will to win can encourage gamesmanship in MILES training. Having a controller with both the OPFOR and the friendly force does reduce cheating.

MILES is an excellent training aid, however, and is well worth the time and effort required to draw, issue, zero, and maintain it. (Spare MILES equipment and two extra batteries per individual set are required to offset battery and equipment malfunctions.) At least one full day should be allowed for familiarization training and zeroing before the lane evaluations are conducted.

The live fire exercise that follows the MILES training provides the squad with accurate, immediate, downrange feedback. When the soldiers move and fire in a realistic environment, their dissatisfaction with the accuracy of MILES disappears and they become comfortable and confident with their weapons.

As beneficial as live firing may be, though, it also has several significant shortcomings. Range fans that do not exceed 150 degrees limit the maneuver option and force frontal assaults rather than flank assaults. Most squads understand the concept of flanking the OPFOR, but through repeated live firing within restricted fire fans they develop some bad habits. Complementing live fire training with MILES blank fire training is one way to counteract this inability to flank the OPFOR.

Another argument for the integration of MILES on a live fire range is the tendency for soldiers to get careless when hunting "targets." If MILES pretraining has not eliminated this tendency, having the soldiers wear MILES harnesses during the live fire will allow a controller to warn or "kill" careless soldiers. The best solution, though, is to find a live fire range that will support flanking moves.

The integration of live hand grenades into this kind of training is difficult. Currently, the safety requirements are so restrictive that simulators and fuze-type dummy grenades may be the best option. But hand grenades can be employed effectively to clear bunkers, and they can be used from a trenchline in the consolidation phase.

Targetry options range from the stationary E-type silhouette to fully automated targets with counters. If automated targets are used, the logistics requirements of battery resupply and maintenance, target protection (hole digging), and target maintenance must be fully understood in the unit. Any target system will work, but the simpler systems work the best. Manual pop-up targets assembled from wooden frames, E-type silhouettes, elastic straps, balloons, and pull cords are easy to construct and emplace, and they work well. The silhouette, too, can be modified to present a flank shot by inserting a half target perpendicular to and centered on the front of the target.

Double balloons can be used to differentiate between suppressed targets and killed targets. (When one balloon pops, the target is suppressed; when the second balloon pops, the target falls.) Chemical lights can be attached to the balloons for live fire exercises at night. Contact can be initiated with a pneumatic gun or by setting off fireworks that have been attached to the targets. Some kind of clear cue to initiate the engagement is vital to the soldiers' understanding and motivation.

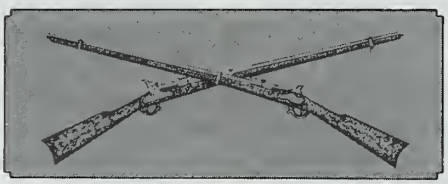
At the conclusion of the training, time must be allocated for the squad leader to conduct an after-action review. The learning takes place when the soldiers present their own observations of things done well and of things done poorly. The squad leader must control the review so that it does not deteriorate into a lane grader or leader critique of the soldiers' performance.

The after-action review should be conducted on a terrain model overlooking the lane. A videotape of the performance will help considerably if one is available. Tasks that were executed poorly should be retrained as soon as possible. If only the leader was deficient, one technique is to have him walk behind another squad and observe its training.

A movement to contact and hasty attack is clearly an important and productive training event and a core tactical mission. No collective offensive task provides more economical training on the most important offensive tasks. Although this training is leader intensive, it also requires all of the members of the unit to perform critical individual combat skills in support of the collective task.

A unit that masters the movement to contact and hasty attack is trained to face uncertainty with confidence and skill. Whatever the cost of this training may be, the result is worth it.

Captain William O. Odom served as a platoon leader and a company commander in the 2d Battalion, 75th Ranger Regiment, at Fort Lewis. A 1979 ROTC graduate of Purdue University, he is now attending Ohio State University in preparation for an assignment to the U.S. Military Academy.



SOVIETS' "OTHER" FORCES

CAPTAIN RONALD M. BONESTEEL

When one hears about the Soviet armed forces, the usual topics seem to be their nuclear forces, their great armored capability, or their constantly improving aircraft. What is rarely discussed are those "other" forces that, although relatively few in number, may have just as great an effect in battle, if not greater. These "other" forces are those of the Soviet *desant* force—the air assault, airborne, and *Spetsnaz* units of the Soviet Army.

The *Spetsnaz* forces (or forces of *spetsialnoye naznachenie,* which means "special designation" or "special purpose") are also known by various other names—raiders, diversionary troops, and reconnaissance-sabotage troops. Although there are a number of other organizations within the Soviet Union, such as the KGB, that run "special operations," the term *Spetsnaz* refers only to those units that come under the supervision of the Main Intelligence Directorate—*Glavnoe Razvedyvatelnoe Upravienie,* or GRU.

The role of *Spetsnaz* units in war primarily includes:

- Assassinating military and political leaders (a mission also carried out by the KGB).
- Finding an opponent's nuclear facilities in order to designate them for destruction by aircraft or missiles or to destroy them outright.
- Neutralizing an opponent's command, control, and communications systems.

• Destroying high priority targets such as airfields, naval bases, and air defense systems.

• Disrupting the opponent's power sources such as power stations, oil and gas storage centers, pipelines, electrical power lines, and transformer stations.

• Preparing aircraft landing areas and drop zones within the opponent's rear area to help support airborne operations.

To accomplish these missions, the Soviet Union expects to have the following *Spetsnaz* units available for war:

• Forty-one independent companies, with one allocated to each combined arms and tank army. Each of these independent companies consists of a headquarters element, three parachute platoons, a communications platoon, and supporting sub-units. There are 115 men in each company, including 9 officers and 11 warrant officers. A company can operate as one unit or in as many as 15 sub-units (with flexible organizational structures). Its communications platoon is capable of maintaining communications with the 15 sub-units, if necessary, over a range of 1,000 kilometers.

• Sixteen *Spetsnaz* brigades, with one supporting each Soviet *front*. A *Spetsnaz* brigade is composed of a headquarters element, a headquarters company, three or four parachute battalions, and appropriate support elements. A *Spetsnaz* brigade has between 1,000 and 1,300 men and can operate as one unit or as 135 sub-units. Unlike other *Spetsnaz* units, the headquarters company has only professional soldiers in it and is maintained at the highest state of combat readiness. This company's sole mission is the assassination of enemy military and political leaders; it is thus the only regular *Spetsnaz* unit that will come in contact with *Spetsnaz* agents currently in the field.

• Four *Spetsnaz* naval brigades, with one allocated to each fleet. These brigades operate in much the same way as their counterparts at the *front* level, but there are some variations in their organization. These brigades consist of a headquarters element, a headquarters company (with the same mission as above), a group of midget submarines, two or three battalions of combat swimmers, one parachute battalion, and supporting units.

In addition, there are other, more specialized, *Spetsnaz* units. The estimated wartime strength of the Soviet *Spetsnaz* force, then, will be between 27,000 and 30,000 troops.

The employment of the *Spetsnaz* agents and units varies by designation. The intelligence-gathering agents of the *front* level intelligence units operate during peacetime to gain intelligence on some of the more sensitive installations within an opponent's area.

Thus, immediately before the start of hostilities, the personnel of the *Spetsnaz* brigade headquarters companies will begin infiltrating into an area to prepare for their specific missions. They will most likely enter through legal entry points with false papers.

Most of the *Spetsnaz* teams will be inserted using fixed-wing aircraft shortly after the initiation of hostilities. This will most likely be as part of the initial air operation conducted by the Soviet air forces. They may also be inserted simultaneously on a mass scale and probably in conjunction with numerous other insertions of airborne and air assault forces.

The army level independent companies will be dropped from 100 to 500 kilometers behind the opponent's front lines, while the *front* level brigade units will go in 500 to 1,000 kilometers behind the lines. The naval brigades will concentrate their efforts against the opponent's naval bases, with priority going to submarines.

Upon landing, these units will establish operating bases normally several tens of kilometers away from their objectives. They will secure and camouflage all of their unneeded gear at the base, booby-trap the area around it, and leave a security force behind, while most of the team moves out to accomplish its missions.

AIRBORNE

The second type of *desant* force that an opposing force can expect to see, should hostilities break out, are Soviet airborne units (*Vozdushno-Desantnye Voiska*, or VDV). The VDV, some 50,000 soldiers strong, is organized into eight divisions. (Of these eight divisions, four are specifically oriented on Europe, and a fifth is in central reserve at Tula.) Using only military transport assets, however, the Soviets can fully deploy only one airborne division, or the major combat elements of two divisions, within a combat radius of 1,000 nautical miles. With the assistance of 1,000 civil transport planes, the major combat elements of a third division could also be deployed.

More specifically, the military transport aviation force, with the specific mission of providing lift to airborne units, consists of approximately 1,700 aircraft. This force is made up of the older AN-12 Cub and AN-22 Cock transports, which are slowly being replaced by the newer and more efficient IL-76 Candids. To transport one airborne regiment equipped with BMDs—armored fighting vehicles—50 to 60 Candids or 90 to 115 Cubs would be required, with the AN-22 Cock being used primarily as a cargo hauler, much like the C-5 Galaxy.

Soviet airborne divisions are much heavier than the U.S. 82d Airborne Division in design and therefore have greater lift requirements. Each Soviet division has three BMD-equipped regiments (totaling 330 BMDs), an artillery regiment (equipped with 30 D-30 122mm howitzers and six M1975 122mm rocket launchers), an antitank battalion (equipped with 31 ASU-85 assault guns), and several other combat and combat service support elements.

These divisions can be used to accomplish strategic missions against deep targets, such as national capitals or other administrative-political centers, industrial or economic centers, or ports and airfields. Operational level missions might also include ports and airfields, along with headquarters and command posts, logistic facilities, communications facilities, key terrain points (such as mountain

passes, bridges, and water obstacle crossing points), and action to block or neutralize reserves. These operational level missions will be conducted in support of army or *front* operations, and normally at distances of up to 500 kilometers beyond the front lines.

Although some of the strategic missions might well be carried out by division-sized elements, the remainder of those missions and the vast majority of the operational level missions will be carried out by smaller units, from company to regiment. To employ these units effectively, the Soviets realize that they will need to depend upon achieving extreme surprise and upon conducting airborne operations under the cover of darkness or bad weather.

Finally, the airborne units will normally conduct their airdrops from an altitude of 150 to 300 meters, with the heavy equipment being dropped ahead of most of the soldiers. (They do not appear to use a system such as our low-altitude parachute extraction system.) The drop zones are normally 10 to 20 kilometers from the objective, and it is here that the appropriate sub-units of the drop force quickly organize before moving to their respective attack positions. The Soviets consider it essential that they reorganize and clear a drop zone as soon as possible, because this phase of an operation is considered the second most vulnerable (with the air movement phase being the first).

The third group of units in the Soviet *desant* force are those that conduct air assault missions or, as the Soviets term it, missions involving "vertical maneuver." According to Major General Belov—the most widely publicized Soviet theoretician on helicopter warfare—"vertical maneuver" involves "military transport and army aviation airmobile troops which are organized into fundamentally new combined arms antitank and reconnaissance combined units and sections; and other air-transportable combined units and sections."

Although the employment of VDV and *Spetsnaz* forces also clearly fits into this definition, the term "vertical maneuver" refers mostly to the employment of those units that are organic to the *front* level and below. These units include the airmobile and newly formed air assault brigades organic to each *front*; the air assault battalion organic to each army; the air assault-trained motorized rifle battalion found in each motorized rifle regiment; and possibly a specially trained company in each division that is designed

to conduct commando-type missions at the tactical level.

There is little more to be said about the motorized rifle and commando units. These are not new units in the organization of the Soviet division, but are made up of normal motorized rifle troops who receive extra or special training to accomplish specific missions. Their existence gives a division commander a tactical air assault option. The missions for these units will normally be restricted to a depth of 20 kilometers into an opponent's rear area, and will include such assignments as securing the far side of major obstacles, moving rapidly into an area hit by a nuclear strike to secure it for the main body, conducting operations against command and control or logistic areas, and working with forward detachments to help speed their movement (by securing river crossing points and the like).

The army level air assault battalions have missions similar to those of their division counterparts; but because they have one company equipped with BMDs instead of BMPs (as are the motorized rifle battalions used by the divisions), they will be more effective on the ground once they have been inserted. This is due to the fact that the division level forces will not be able to take their BMPs and will thus have to fight a dismounted action on the objective. The army level air assault battalion will have a limited maneuver capability, however, since its BMD-equipped company will be able to take its BMDs. This leaves the army level commander with an air assault force composed of two dismounted companies and one mounted company, which can operate together or on separate missions.

The airmobile brigades, which have been in existence since the early 1970s, are made up of three dismounted rifle battalions and possibly a BMD-equipped battalion (although sources conflict on this latter point). Because of their "lightness," these brigades are not expected to be widely used on a European battlefield. If they should be, however, they could be effective in securing such objectives as mountain passes, government centers, and airfields. The employment of these brigades is expected to be at a depth of 20 to 100 kilometers into an opponent's rear area. Although manned by airborne-trained soldiers, these units will be inserted via helicopter, and are not expected to jump in.

The final "vertical maneuver" unit is the air assault brigade. Like the airmobile brigade, this unit gives a *front* level commander direct access to an air assault unit. Because it is structured with two BMD-equipped battalions, as well as two airborne rifle battalions, the air assault brigade does not have the apparent problem of "lightness" that the airmobile brigade has. Consequently, it will probably be used to depths of up to 300 kilometers.

Its list of possible missions includes all those already mentioned in the tactical or operational realm. Its most significant role, though, is the one it may play in support of an operational maneuver group (OMG). In fact, the air assault brigades may well be the forward detachments of the OMGs. Their operations would include the destruction of an opponent's nuclear weapons, command and control areas, and air defense sites. They would be effective for seizing the key terrain necessary for the OMGs to keep up their high rates of march—in particular, river crossing points. They could conduct economy-of-force and raiding missions ahead and in support of the OMGs. In short, the Soviets have seen an advantage in using an air assault brigade in this manner, and their training exercises indicate that they have every intention of doing so on the battlefield.

Although the *desant* forces of the Soviet Army may often be considered the "other" forces by Western analysts, it is apparent that they have a relatively high priority at home. The Soviets appear to have great plans for their *desant* troops on the next battlefield, and we would be unwise to give them less consideration than they are due. The success of *Spetsnaz*, airborne, and air assault forces can have a significant, if not devastating, effect on an opponent's forces. Therefore, it is to our advantage, if not vital to our survival, to be prepared for them before they come.

Captain Ronald M. Bonesteel is attending graduate school at the Russian Research Center, Harvard University, as part of his training as a Soviet Foreign Area Officer. A 1979 graduate of the United States Military Academy, he has served in Korea and at Fort Carson in platoon and company command positions, and as a battalion staff officer.

PAST TIMES

EDITOR'S NOTE: By a cover letter dated 15 January 1946—File 461/2201 (15 Jan 46) GNGCT—General Jacob L. Devers, then commander of Army Ground Forces, forwarded to the Army's service schools copies of a "pamphlet" that had been prepared the previous year by General George S. Patton, Jr. It was titled "Reflections and Suggestions, Or, In A Lighter Vein, Helpful Hints to Hopeful Heroes."

In his letter forwarding the pamphlet, General Devers indicates that he agrees "in general with the ideas expressed and feels that there is much of value which can be used in the courses of instruction at the service schools."

What follows is only a portion of that pamphlet. An original copy of the pamphlet that was sent to the Infantry School is in the School's Donovan Technical Library. We wish to thank the library's staff for making it available to us.

Helpful Hints to Hopeful Heroes

Probably there is nothing original in what I shall now put down, because war is an ancient subject and I, an ancient man, have studied and practiced it for over 40 years. So, what appears to me as original thought may be simply subconscious memories.

Concerning the Soldier

The soldier is the Army. No army is better than its soldiers. The soldier is also a citizen. In fact, the highest obligation and privilege of citizenship is that of bearing arms for one's country. Hence, it is a proud privilege to be a soldier—a good soldier. Anyone in any walk of life who is content with mediocrity is untrue to himself and to American tradition. To be a good soldier a man must have discipline, self respect, pride in his unit and in his country, a high sense of duty and obligation to his comrades and to his superiors, and self confidence born of demonstrated ability.

There has been and is now a great deal of talk about discipline, but few people, in or out of the Army, know what it is or why it is necessary.

When a man enters the Army he leaves home, usually for the first time, and also he leaves behind him the inhibitions resulting from his respect for the opinion of his parents and his friends, inhibitions which, unknown to himself, have largely guided his existence. When he joins a unit and lacks this corrective influence, he is apt to slip in morals, in neatness, and in energy. Administrative discipline must replace the absent inhibitions.

All human beings have an innate resistance to obedience. Discipline removes this resistance and, by constant repetition, makes obedience habitual and subconscious. Where would an undisciplined football team get? The players react subconsciously to the signals. They must, because the split second required for thought would give the enemy the jump.

Battle is much more exigent than football. No sane man is unafraid in battle, but discipline produces in him a form of vicarious courage which, with his manhood, makes for victory. Self respect grows directly from discipline. The Army saying "Who ever saw a dirty soldier with a medal?" is largely true. Pride, in turn, stems from self respect and from the knowledge that the soldier is an American. The sense of duty and obligation to his comrades and superiors comes from a knowledge of reciprocal obligation and from the sharing of the same way of life. Self confidence, the greatest military virtue, results from the demonstrated ability derived from the acquisition of all the preceding qualities and from exercise in the use of weapons.

It is an unfortunate and, to me, tragic fact that in our attempts to prevent war we have taught our people to belittle the heroic qualities of the soldier. They do not realize that, as Shakespeare put it, the pursuit of "The bubble reputation even at the cannon's mouth" is not only a good military characteristic but also very helpful to the young man when bullets and shells are whistling and cracking around him. Much more could be done if the women of America would praise their heroes and if papers would publish the citations of soldiers in their hometowns and

further, if foolish ideas of security did not make the citations so unrealistic. Perhaps the returning soldiers in this way may correct this very unfortunate situation.

One of Kipling's poems starts as follows:

When the young British soldier
Comes out of the East,
He acts like a babe
And drinks like a beast,
And wonders, because he is often deceased
Ere he learns how to act like a soldier.

All our soldiers do not drink like beasts. In fact, the lack of drinking in our Army is remarkable. However, many do act like babes. What follows is an attempt to make certain suggestions which have proved useful.

Do not dig slit trenches under trees if you can avoid it, because a shell passing overhead and striking the tree acts as an air-burst and the fragments come straight down so that your slit trench is useless to you, although it may be of some assistance to the Graves Registration people.

Slit trenches for gun crews must be in the close vicinity of the gun or else the men waste too much time getting from the trenches to the gun. Also, they are just as apt to get killed while making the run as they would be if they stayed by the gun. Finally, a gun that is not firing is useless and its crew is disloyal to the soldiers in front of them whom they are supposed to be supporting.

The trick expression "Dig or Die" is much overused and much misunderstood. Wars are not won by defensive tactics. Digging is primarily defensive. The only time it is proper for a soldier to dig is when he has reached his final objective in an attack or when he is bivouacking under circumstances where he thinks he may be strafed from the air or is within artillery range of the enemy. Personally, I am opposed to digging under such circumstances, as the chances of getting killed while sleeping normally on the ground are quite remote and the fatigue from digging innumerable slit trenches is avoided. Also, the psychological effect on the soldier is bad, because if he thinks he has to dig he must think the enemy is dangerous, which he usually is not.

"Hit the dirt" is another expression which has done much to increase our casualties. Frequently in fighting Germans and probably other troops in the next war, we will find that they have resorted to their knowledge of our custom of hitting the dirt. What they do is wait until we have arrived at a predetermined spot on which they have ranged rockets, mortars, or artillery and then they put on a sudden and violent machinegun fire—frequently straight up in the air. The soldier, obsessed with the idea of hitting the dirt, lies down and waits supinely for the arrival of the mortars, rockets, etc. He usually doesn't have to wait long.

The only time it is proper for a soldier to drop is when he is caught at short range, under 300 yards, by concentrated small arms fire. But even then he must not hit the dirt and stay supine. He must shoot fast at the enemy or in the direction of the enemy, because it is as true now as when Farragut stated it in the Civil War that "The best armor (and the best defense) is a rapid and well directed fire." It is a sad commentary on our troops that frequently we get the report that such and such a unit is pinned down under fire and later the same unit comes back.

When soldiers are caught in a barrage, either from mortars, rockets, or artillery, the surest way to get out of it is to go forward fast because it is almost the invariable practice of the enemy to increase rather than decrease his range.

In the days when the chief small arms fire on the battlefield was delivered by rifles, it may have been necessary to advance by rushing in order to build up the firing line. Today, when the chief small arms fire on the battlefield and the majority of the neutralizing fire is delivered by machineguns, mortars, and artillery, there is no advantage in advancing by rushing because until you get within 300 yards, small arms fire has very little effect, whereas when you lie down between rushes you expose yourself to the effect of shrapnel. When you get to 300 yards your own small arms fire, which is superior to anything now existing or which will probably ever exist, will neutralize the enemy's small arms fire so that you do not have to advance by rushing. I say this very feelingly because I have seen on many occasions in maneuvers and in battle troops advancing by rushes when they were defiladed behind hills and could have gone forward in limousines, had they been available, with perfect impunity.

Marching fire. The proper way to advance, particularly for troops armed with that magnificent weapon, the M-1 rifle, is to utilize marching fire and keep moving. This fire can be delivered from the shoulder, but it is just as effective if delivered with the butt of the rifle halfway between the belt and the armpit. One round should be fired every two or three paces. The whistle of the bullets, the scream of the ricochet, and the dust, twigs and branches which are knocked from the ground and the trees have such an effect on the enemy that his small arms fire becomes negligible.

Meanwhile, our troops in the rear, using high angle fire, should put out the enemy's mortars and artillery. As I have stated, even if we fail to put out the mortars and artillery, the most foolish thing possible is to stop under such fire. Keep walking forward. Furthermore, the fact that you are shooting adds to your self confidence because you feel that you are doing something and are not sitting like a duck in a bathtub being shot at.

In marching fire, all weapons must be used. The light machineguns can be used while walking—one man carrying the belt, the other man carrying the gun. The same is true of the Browning Automatic Rifle and, of course, of the M-1. The 60mm mortar advanced by alternate sections can do much in the same way. The 81mm usually should support from one position.

I think if we would say that "Fire is the Queen of Battles" we would avoid arm arguments and come nearer telling the truth. Battles are won by fire and by

Infantrymen of the 9th Infantry Division seek shelter behind a tank (December 1944).

movement. The purpose of the movement is to get the fire in a more advantageous place to play on the enemy. This is from the rear or flank.

Every soldier should realize that casualties in battle are the result of two factors: first, effective enemy fire, and second, the time during which the soldier is exposed to that fire. The enemy's effectiveness in fire is reduced by your fire or by night attacks. The time you are exposed is reduced by the rapidity of your advance.

Bravery and courage. If we take the generally accepted definition of bravery as a quality which knows not fear, I have never seen a brave man. All men are frightened. The more intelligent they are the more they are frightened. The courageous man is the man who forces himself, in spite of his fear, to carry on. Discipline, pride, self respect, self confidence, and the love of glory are attributes which will make a man courageous even if he is afraid.

The greatest weapon against the so-called "battle fatigue" is ridicule. If soldiers would realize that a large proportion of men allegedly suffering from battle fatigue are really using an easy way out, they would be less sympathetic. Any man who says he has battle fatigue is avoiding danger and forcing on those who have more hardihood than himself the obligation of meeting it. If soldiers would make fun of those who begin to show battle fatigue, they would prevent its spread and also save the man who allows himself to malinger by this means from an after-life of humiliation and regret.

Trenchfoot. Soldiers must look after themselves, particularly in wet or cold weather. This applies particularly to "trenchfoot" which, with reasonable assistance from the higher command, can be largely prevented if the soldier will only take the trouble to massage his feet and put on dry socks. He is not responsible for the arrival of dry socks, but provided they do arrive, he is responsible for putting them on.

The same thing is true of venereal disease. Soldiers do not have to contract it if they will take the precautions which the military establishment provides. When they do contract it, they are disloyal to their comrades because while they are recovering, somebody else is doing their work.

Small Unit Tactics

The best way for Infantry to go through a woods is to advance in a skirmish line on a distant direct point if such is available or, more probably, on a compass bearing. The skirmish line should be at reduced interval and should move straight forward through the woods using marching fire. If this is done, it will be surprising how little resistance will be encountered, because if the enemy attempts to fire through the woods, his rifles, which are always less effective than ours, will not penetrate through the trees while ours will penetrate and so get him.

In fighting through European woods, which are intersected at right angles every thousand meters by lanes, do not walk down the lanes and be careful how you cross them—that is, cross them fast—because the enemy usually has them swept with machineguns.

Squads should seldom be split. However, if it is necessary to split a squad, be sure that the unit separated is at least capable of mutual support. This means that the unit separated from the squad should not be fewer than three men. The squad possesses in itself the weapons necessary for a base of fire and a maneuvering element. This should be its invariable method of attack, but the squad leader should not spend so much time thinking which way he is going to envelop that he suffers casualties which would have been avoided had he attacked at once.

In small operations as in large, speed is the essential element of success. If the difference between the two possible flanks for envelopment is so small that it requires thought, the time wasted in thought is not well used. Remember that the life of the infantry squad depends on its capacity of fire. It must fire.

When a small unit disposes both 60mm and 81mm mortars in an attack, the 60mm mortars should fire on the front line of the resistance while the 81mm fires for depth and to hit the supports and heavy weapons.

Tanks and infantry. The question of whether infantry or tanks lead in attacking is determined by the character of the ground and of the enemy resistance. Whenever the ground permits tanks to advance rapidly, even with the certainty of a loss from minefields, they should lead. Through dense woods or against prepared positions or unlocated antitank guns, infantry leads followed closely by the tanks who act as close supporting artillery. But, irrespective of the foregoing, some tanks must accompany

the infantry when they reach the objective. These tanks are for the purpose of removing enemy weapons which emerge after the passage of the leading tanks.

Pillboxes. Pillboxes are best attacked by the use of prearranged groups. A satisfactory group consists of two BARs, a bazooka, a light machinegun, two to four riflemen, and two men with the demolition charge. Sixty pounds of TNT is ample. Before initiating an attack on a pillbox area, a reconnaissance should be made to determine which boxes are mutually supporting. Those in such a group must be attacked simultaneously. The best results are obtained by a silent night attack which places the assault groups in position close to their respective pillboxes at dawn. The apertures are immediately taken under fire and silenced. When this is achieved the demolition charge covered by riflemen and light machineguns is placed against the door at the rear of the pillbox, the fuse is lit, and the men withdraw around the corner of the building. As soon as the charge is exploded, riflemen throw in grenades—preferably phosphorus. Any enemy emerging are killed or captured according to the frame of mind of the enemy.

When circumstances prevent a night operation, similar but more expensive results are obtained by advancing close in the wake of an artillery concentration.

Another adjunct to the attack on pillboxes is a self-propelled 155mm gun where conditions permit its use. At short range the effects are very satisfactory.

Street fighting. Street fighting is simply a variation of pillbox fighting. A similar group but reinforced with more riflemen is effective. The additional riflemen are split on opposite sides of the street so as to take under fire enemy personnel appearing in the upper stories on the side across from them. When a house offers resistance, the windows are silenced by fire as in the case of pillboxes, and under cover of this immunity a bazooka crew fires one or two rounds at the corner of the house about three feet from the ground. When a hole has been made by this means, phosphorus or HE grenades are thrown into the lower floor and cellar to discourage those operating there. The demolition essential in pillboxes is really not needed in street fighting.

In street fighting it is very essential to avoid hurrying. One group as described above can usually clear a city block in 12 hours. When tanks are available they replace the bazookas in blowing holes in the walls of the lower floor. However, they must be buttoned up to avoid grenades from the upper floors and should be further protected by riflemen to keep the enemy from the windows. Self-propelled 155mm guns are extremely useful in cities against moderate masonry construction. One round with delayed fuze will breach all the houses on one side of a city block if fired at a very obtuse angle.

Two-way attack. Wherever possible, beginning with the squad, use a base of fire and a maneuvering element. The maneuvering element should be the larger of the two forces and should start its attack well back from the point of contact of the base of fire. The maneuvering force must proceed sufficiently far beyond the hostile flank to attack from the rear. As soon as the enveloping attack, or better, the rear attack has progressed sufficiently to cause the enemy to react, the base of fire transforms itself into a direct attack along the original axis of advance.

River crossing. In river crossings or assault landings, there is a high probability that the boats containing a company or even a platoon will not all land at the same point. Therefore, each boat should be organized on a boat-team basis and contain means for producing a base of fire and an encirclement. These boat teams should practice as such before embarking and each boat team in the assault wave must be informed of the geographical feature to which the assault wave is supposed to penetrate. This geographical feature, preferably a road or railway, should be far enough from the water's edge to prevent small arms fire bearing on the beach. No beachhead can be considered at all sure until it has advanced to a perimeter at least 8,000 yards from the beach and/or occupies the controlling terrain features. In a night landing, desperate efforts must be made to gain this distance before daylight.

Hill fighting. During fighting in hilly or rolling country, platoons get widely separated. The best practice is for the support and reserve squads of an attacking platoon to envelop on the up-hill side. When you have once gained a ridge or a hogback, do not lose altitude.

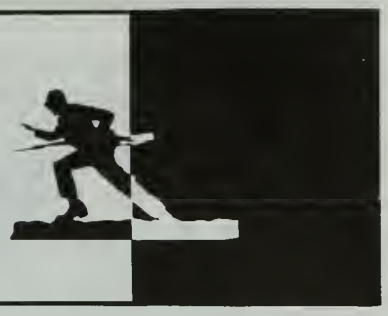
Never attack along the bottom of a valley unless you have the heights on both sides in your possession. In all valleys there are geographical features which form obstacles to a direct advance and subject those on the valley floor to observed fire from the heights.

Fire on infested areas. Due to the pernicious traditions of our known distance rifle marksmanship, we are prone to hold our fire until we see targets. In battle these are seldom visible. When any group of soldiers is under small arms fire, it is evident that the enemy can see them; therefore, men should be able to see the enemy but seldom do. When this situation arises, they must fire at the portions of the hostile terrain which probably conceal enemy small arms weapons. I know for a fact that such procedure invariably produces an effect and generally stops hostile fire. Always remember that it is much better to waste ammunition than lives. It takes at least 18 years to produce a soldier and only a few months to produce ammunition.

Surrender. Any soldier who surrenders with arms in his hands is not doing his duty to his country and is selling himself short, because the living conditions of the prisoner of war are extremely bad. Also, the prisoner of war is apt to become the unintended victim of our own air and artillery bombardment.

If the enemy indicates a desire to surrender, make him come to you with his hands up. Don't advance toward him and do not stop shooting until he stops to surrender himself. When the enemy has surrendered, he must be treated in accordance with the rules of land warfare.

TRAINING NOTES



Company Defensive Position

LIEUTENANT COLONEL CLARK P. CAMPBELL
COMMAND SERGEANT MAJOR CHARLES L. MOORE

Establishing a company defensive position is one of the most difficult of all light infantry missions. It requires detailed planning, a solid grasp of fundamental concepts at each level of command, and decentralized execution. The ability to put in a truly effective defensive line in a timely manner clearly separates the good units from the average ones.

The defense starts with the operations order. From it the company commander gets a clear understanding of his battalion commander's intent and any necessary control measures. The actual work starts with a map study before the company commander conducts his reconnaissance, which is the single most critical task, and he must have a basic plan before he arrives at the designated location. He should start on a flank and work on tying that flank in with that of the flanking commander, or if it is an exposed flank he must decide on how he intends to protect it. He then works from that flank through his entire sector.

As his first priority, he concentrates on the best spacing for the platoon positions, the concentration of weapon systems on dismounted and mounted avenues of approach, and the places where he is willing to accept risk.

During his reconnaissance, he must decide on the placement of his crew-served weapon systems. Company commanders themselves must emplace their M60 machineguns and Dragon systems and should also designate final protective fires to insure the greatest possible coverage of the company's front. In the light infantry particularly, these weapons are too few and too important to be allowed to support only one platoon.

FLANKS

The reconnaissance continues through the sector and goes to the other flank where, again, the commander ties that flank in with an adjoining unit, or develops plans to protect that flank if it is an exposed one: It ends with identifying the general location of alternate and supplemental positions, command post locations, vehicle and tent positions, trail and resupply networks, and withdrawal or counterattack routes.

The reconnaissance is best conducted by the company commander and his fire support officer, with the platoon leaders being brought up only after the commander has a final plan. The commander then takes his platoon leaders, mortar section sergeant, and wire chief and physically lays out the plan he has envisioned. He should take his time and make sure his subordinates understand what he wants. He must be specific and make any necessary adjustments before moving on. This includes specifying the vegetation to be cut, whether positions will be staggered or linear, the average distance between them, the immediate security requirements, and any specific innovations he desires (abatis and the like).

The commander must make sure his platoons fully understand how he wants them to time their efforts—that is, where he wants them to be in four hours, eight hours, twelve hours, and so on. He must also consider how much security is needed and what critical tasks must be completed before allowing the soldiers to be put on a rest cycle. After the reconnaissance, the platoon leaders return to their assembly areas, brief their platoons, and move to their sectors.

By the time the company commander returns to his command post (CP) area, his first sergeant should have the CP fully established, the mor-

tars should be digging in, and the units' vehicles should be camouflaged.

Completing a good plan and passing it on to his subordinates is a great start for any company commander. Unfortunately, it is only the beginning. Having a priority of work is common to most infantry units but it is just as commonly ignored or misunderstood. For example, there is no excuse for shifting positions after the soldiers have them half completed. That type of leadership will only result in the soldier's being reluctant to dig and convinced that their commander does not care about their welfare. (The example in the accompanying table breaks the tasks down by individual and time. The time lines and other decision points will shift on the basis of METT-T and the available resources, but if a commander does not have a system that allows his key individuals to make decisions at the proper time, the result will be wasted labor and a weak defense.)

The single most important element of a successful defensive line is the effectiveness of the weapons. Camouflage and concealment are a secondary concern unless they are specified in the operations order.

Positions must be prepared in stages to prevent unnecessary work by the soldiers. Sector stakes go in as a position is roughed out, but digging does not begin until approved by the platoon leader (unless the platoon is taking fire, in which case all of this talk is unnecessary). The platoon leader does not give the order to dig until the company commander or the first sergeant has approved his position siting, fields of fire, and most important, his tie-in on the flanks.

Once the order to dig is given, the squad leaders must exercise extreme care to make sure each position is big enough to fight in and live in for an extended period. Thus, if a soldier prepares a hole for three days and then has to stay in it for 30 days, he shouldn't have to reconstruct it. In other words, from the beginning the hole should be as big as needed and as strong as possible.

Roofing timbers, if available, must

TIME LINE FOR DEFENSIVE TASKS

	← 2 HRS →	← 6 HRS →	← 12 HRS →	← 18 HRS →	← 24 HRS →
CO CDR	o Recon (as early as possible) * Sets in plts	* Walks ½ line (Rests) o Spot checks Plt Ldrs setting in sqds; * Approves Co fire plan (FSO); Checks each MG and AT wpn		o Walks line o Checks obstacles (Rests)	
CO XO	o Brings up Company o Requests fuel, ammo, Class IV o Distributes pioneer tools	o A22 positions Class IV, ammo, etc. (Rests)	o Walks line	o Chow run (Rests)	
1SG	o Sets in Co HQ, mortars, vehicles (Rests) o Sets plts with A/A o Checks AT section	* Walks ½ line Checks each MG and AT wpn	o Checks AT section (Rests)	o Walks line o Checks obstacles	
PLT LDR	o Checks readiness of sqds (Rests) o Reviews and checks OPORD info	* Sets in sqds o LP/OP out o Checks MGs and AT wpns * Gives OK to dig after checking hasty positions * OKs rest plan	* Checks each wpn position when hole is "in" * OKs overhead cover (Rests)	o Walks line	
PLT SGT	o Checks ammo, food, water o Checks maint of wpns, vehicles, and commo (Rests) o Special care of MG teams	o Sets in CP tents, ammo, trail network o Checks MGs, AT wpns o Plt sector sketch	o Institutes rest plan based on METT-T o Starts detail for tree cutting, sandbags	* Walks line OKs overhead cover before dirt goes on (Rests)	
SQD LDR & SQD	o Same as Plt Sgt o Special Care of feet, wpns, equipment (Rests)	o Sector stakes in o Roughs out hasty position o Claymores in o Range cards o Digs in	o Obstacles o Overhead cover ← Detail/Security/Rest → based on METT-T directed at Co level		

be heavy enough to support a full 36-inch dirt cover. Frontal berms must be able to stop both small antiarmor rounds and bullets. Soldiers must know the dimensional requirements for berms and overhead cover using soil, snow, icecrete, or some combination of these materials. If the doctrinally prescribed strength and protection cannot be provided, the battalion operations section must be advised of the specific deficiencies.

The overhead cover must leave room for the soldier to sight and fire his weapon comfortably with his helmet on. Platoon leaders must get behind each weapon and verify that the position is adequate and that the sectors of fire interlock. Company commanders must do the same for all machineguns and antiarmor weapons.

In cold weather areas in the winter months, squad leaders must decide which positions must be dug in and which can be built up with snow bags and icecrete. Most positions will require some digging to allow for the comfortable use of weapons.

The positioning of claymores, machineguns, and 90mm recoilless rifles (if issued) is of special concern, because these weapons must be used to provide shock and violent destruction at critical locations. They are always shown on platoon and company fire plans and are always tied into obstacles. These weapons are normally the last to fire during periods of limited visibility, although during daylight machineguns should engage long range targets as they come into range. Machineguns with night sights also may be used on long range targets at night.

These systems will often have separate day and night positions. Machinegun final protective fires (FPFs) should be sited to cover as much of the company front as possible, and every effort should be made to get as much grazing fire as possible. Wire should also be placed along the FPF line to force the enemy to stop in the cone of fire.

Claymores are the best weapons for covering gaps in the grazing fire, but they must be kept under observation to prevent the enemy from disarming them. Machineguns and antiarmor weapons are never emplaced at the flank position in a company or isolated as the last position in a mounted avenue of approach. They should always be protected by at least one rifle position.

The following are a few more ideas for a defensive position:

• Companies should prepare defensive packages of pioneer tools, wire, timbers, and pickets. Each squad and section should have two shovels, two picks, two saws, and two axes. The wire, timbers, and other bulky materials should be prepared in platoon packages (A-22 bags or on ahkios) and kept in the battalion field trains until needed. They should be moved forward to the combat trains if a defense is anticipated.

• Observation posts and listening posts (OP/LPs) are mandatory—one per platoon sector, usually in the center and manned by a fire team. Often this is the only security required, and it allows the rest of the platoon to work. The OP should be close enough to be supported during its withdrawal and far enough out to give enough early warning, but it normally moves closer to the defensive line during periods of limited visibility. The soldiers manning the OP will normally engage the enemy to cause him to deploy and to confuse him about the location of the defensive line, using indirect fire weapons when possible. A simple signal for its return, such as a running password and the sound of the OP's claymore going off, must be known to all.

• Trail discipline is universally misunderstood. It does help keep the position hidden, but more important it reduces confusion when changing security, reinforcing, or resupplying. The number of trails should be kept to a minimum, and they should follow covered and concealed routes whenever possible. Sections of the trails that are under enemy observation must be well marked with warning signs,

while trails forward of the position must be covered by observation and fire.

• In the defense, patrols should be scheduled to deflect or eliminate all enemy probing and reconnaissance efforts. They should have set routes, should include one or more ambush positions, should be as aggressive as possible, and should always try to capture a prisoner. (A squad-size patrol is better than a platoon-size patrol unless the unit is assured of killing a lot of enemy.) A patrol should never be sent outside of communication or indirect fire range, and flank units must know its routes and schedule. Too, a patrol should return to the company lines at first light instead of in the middle of the night. A running password is again required and should be coordinated with the flank positions in case the patrol gets confused. Ground surveillance radar can be used to monitor a patrol's activities and to help guide it back to the company's lines.

• Leaders should always keep radios with them while setting the defense. For instance, it can take up to six hours to walk a company line, and the radio enables the leaders to stay abreast of key events and shift to handle problems.

• Fields of fire should be cut thinly and the gun positions should be disguised; if the soldiers cannot see to shoot their weapons, the fields of fire should be cut still more until they can see their sectors.

• Every soldier should be taught to recite the following items of information as a litany to the company commander, first sergeant, or other "inspectors": Who he is; his unit down to squad level; his job (SAW gunner); who is on his left, right, and front; the signals for the FPF and withdrawal; the enemy, including weapon capabilities; his position, including sectors of fire, range card, and what weapons his frontal and overhead protection will stop. This is a tried and true system that forces soldiers to remember the critical information they need to perform their mission and to survive.

In summary, defensive positions and fire planning must give a soldier a sense of protection and security, or he will not fire his weapon. Establishing light infantry company defensive positions is therefore a task that deserves careful planning and attention.

Lieutenant Colonel Clark P. Campbell is commander of the 5th Battalion, 9th Infantry in Alaska. He previously served as a platoon leader in the 82d Airborne Division and as a company commander in the 5th Infantry Division.

Command Sergeant Major Charles L. Moore is command sergeant major of the 5th Battalion, 9th Infantry. He has served three tours in Alaska and has also served in Vietnam and in Germany.

Training for the Urban Battle

CAPTAIN RICHARD J. KANE

In virtually any future war that can be imagined, every unit—combat, combat support, and combat service support—will conduct military operations on urbanized terrain (MOUT). This means that our training programs must keep pace with the ever-increasing urbanization of lands throughout the world.

The U.S. Army Infantry School is pursuing several Army-wide MOUT training initiatives that are relevant to all branches. Chief among these are a MOUT White Paper, a MOUT training strategy, a MOUT training complex, and Training Circular 90-1.

The recently drafted White Paper highlights fundamental definitions in the current doctrine and the problems that previously resulted from the misuse of terminology. FM 90-10, for instance, defines MOUT as "all military actions that are planned and conducted on a terrain complex where man-made construction impacts on the tactical options available to the commander." This is a broad category that includes not only operations within an urban complex but also operations that are affected in any way by urbanization.

Urban terrain is also a broad term. Although we tend to equate it with buildings, it encompasses any area where man's hand has altered the face of the terrain. Within the full scope of the definition in FM 90-10, then, MOUT is part of almost every combat operation.

The White Paper, on the other hand, uses the term *combat in built-up areas* as one portion of MOUT that pertains to fighting among streets and buildings. This category can be further divided into *combat in cities, combat in small cities and towns, combat in villages,* and *combat in strip areas.*

(Many trainers incorrectly equate MOUT training only with training for combat in built-up areas. We do indeed need more training for fighting

Much of the training we conduct has a MOUT component to it.

in built-up areas, but we also conduct more MOUT training than we generally realize. For example, most of the field training performed in West Germany and Korea today has a significant MOUT component in it.)

MOUT is not an arcane form of combat that demands unique approaches to training. As with other types of terrain (such as mountain, desert, arctic, and forest), urbanization is only one condition (albeit a significant one) that is superimposed over a unit's area of operations.

FM 25-100, Training the Force, is the Army's keystone manual on training, and its systematic approach to training is as applicable to MOUT as it is to any other condition. The manual describes the method of determining what to train and how to train. Leaders must understand its concepts of battle focus, mission essential task lists, battle tasks, performance oriented training, evaluation of training, and training management cycle.

The threat and the operational environment are the foundation for planning operations. Leaders must understand how their potential enemies intend to fight in urban terrain and how urbanization affects their operations. They should follow the normal estimate process—applying the principles of METT-T (mission, enemy, terrain, troops, and time available)—to accomplish the same missions they perform anywhere else. But when necessary they must also apply urban considerations to their usual basic tactics and techniques.

Leaders must be proficient in these tasks before they instruct their soldiers, and leader training should teach doctrine, standardize training, and train the trainer. In units, this is typically part of the officer and NCO development programs.

During individual training, soldiers must learn basic urban combat tasks such as movement in built-up areas or the construction of urban fighting positions. They must also learn any urban tasks that pertain specifically to their duty positions; for example, unit medical personnel should know how to evacuate litter patients from multistory buildings.

Collective MOUT training should be conducted at every level. Due to the highly decentralized nature of urban combat, however, squad and platoon level tasks are the most critical, and they must be mastered. Trainers can integrate these tasks into platoon and company situational training exercises and battalion field exercises. Training that requires fewer resources at company and battalion level can include command post exercises, battle simulation exercises, and map exercises.

MOUT proficiency can be sustained by refresher training and continued by instruction on more advanced urban tactics and techniques. Varied conditions such as a nuclear, biological, and chemical threat or the presence of civilians in an area will further support sustainment training.

The Army is in the process of building more facilities to support its increased urban training requirements. A standard design that was developed to meet this need is presented in Huntsville (Alabama) Division Manual 1110-1-7, Design Information for Military Operations in Urbanized Terrain (MOUT) Training Complex, dated February 1986. (This design manual supersedes a similar manual dated May 1984.) It presents a generic design for a MOUT training complex (MTC) consisting of two separate facilities; a collective training facility (CTF) and a MOUT assault course (MAC). An entire company can train in the complex at one time.

The CTF, which represents a typical built-up area, comes in two sizes—either 16 or 32 buildings. Many of these buildings are only partially constructed to depict buildings that have been wrecked by combat. (Figure 1 shows an example of a CTF layout.) The CTF can support the training of platoons and companies. Outside the facility, units can train in such MOUT tasks as support of a deliberate attack against the CTF or preparation of battle positions that support a CTF strongpoint.

The MAC is a seven-station course, with each station depicting a separate tactical situation for training in individual and small unit-tasks. (Figure 2 shows a typical MAC layout.) Five of the seven stations accommodate live-fire training.

Although live hand grenades cannot be used in the current MAC stations, a new live-fire station in which live grenades can be used is being designed for the MAC. Called the Grenade House, this station is constructed of steel-fiber-reinforced shock-attenuating concrete and has training, maintenance, and safety advantages over buildings lined with tires.

Standard design MTCs have been

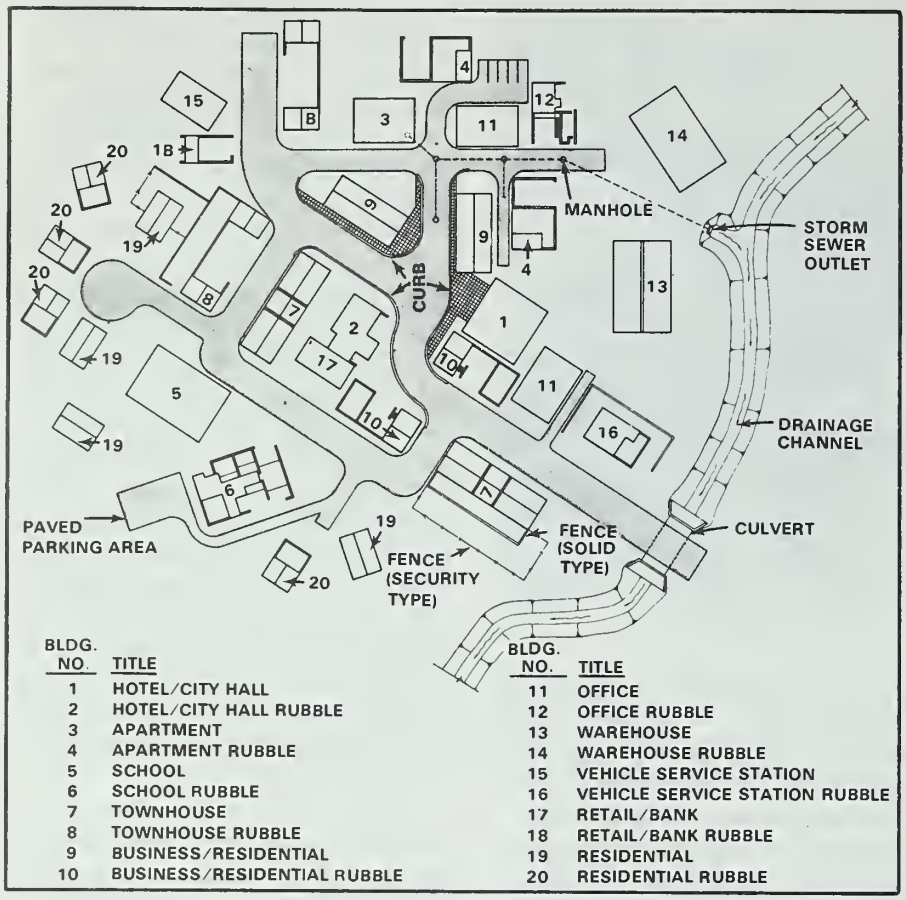


Figure 1. Typical 32-building CTF.

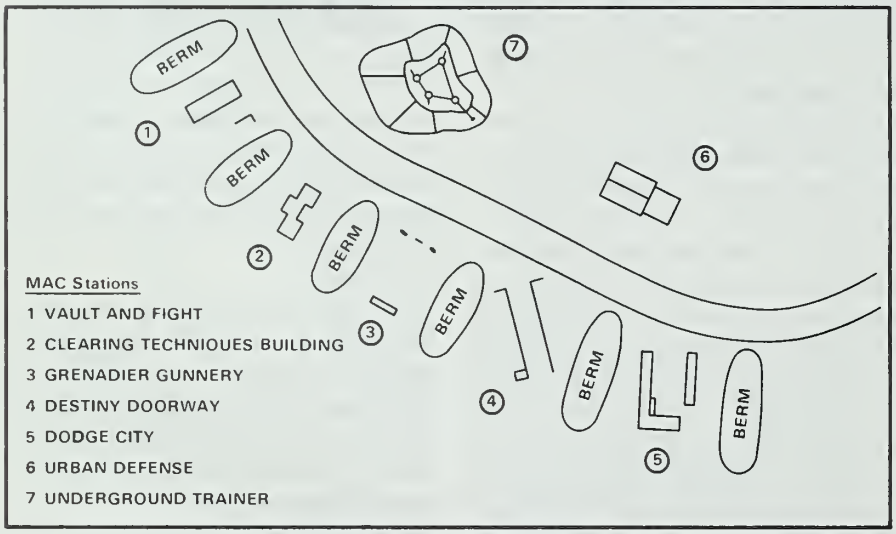


Figure 2. Typical MAC layout.

built at Fort Hood, Fort Pickett, and Fort Ord, and many others are planned for both the Active Army and the Reserve Components. The exact details of each CTF and MAC will vary from one installation to another on the basis of local guidance and site requirements.

It is absolutely essential that engineers, range personnel, safety experts, and MOUT trainers coordinate closely throughout the planning and construction process to ensure that the training objectives can be achieved safely and effectively. Some planners may try to site their CTF and MAC close together to ease command and control during training, but this will limit the usefulness of the CTF. In fact, the two facilities should be built in separate locations to allow soldiers to maneuver around the CTF in all directions.

Training Circular 90-1, Military Operations on Urbanized Terrain Training, which is described below, is a single-source document for MOUT training that is conducted in units. Although it is a user's guide to a standard design MTC, it can also be applied to any similar facility. To adapt it to their own training needs, trainers need only exercise their own judgment, imagination, and experience.

Chapter 1 presents the MOUT training objective and training strategy in terms that are appropriate to company-level leaders. Chapter 2 covers urban combat doctrine—both U.S. Army and threat doctrine—and describes the urban battle that squads, platoons, and companies will face.

Chapter 3 describes the MOUT assault course and presents an effective training sequence for each station with detailed explanations and diagrams. This chapter gives trainers a ready-made lesson plan. Chapter 4 describes the collective training facility, discusses how to develop scenarios for training exercises, and includes a sample training scenario. The appendixes round out the circular with a variety of information to help units with their MOUT training programs.

The Infantry School realizes that MOUT training will continue to compete with a host of other training priorities. But the urbanization of our future battlefields, along with a sound analysis of our training needs under FM 25-100, demands that we train our units to mission readiness in urban terrain. The MOUT training complex will greatly facilitate this training.

Captain Richard J. Kane served as the MOUT training programs officer in the Directorate of Training and Doctrine, U.S. Army Infantry School. He is now assigned to the Office of the Deputy Chief of Staff for Operations, Department of the Army. A former company commander in the Berlin Brigade, he has also attended the Israeli Defense Force Company Commander's Course.

IOBC Tactical Problems

CAPTAIN STEPHEN A. JOHNSON

During the past two years the Infantry Officer Basic Course (IOBC) has implemented many training incentives, ranging from live fire exercises to an increase in performance oriented training. One of these incentives, in particular, can easily be adapted for use in almost any infantry unit to supplement Military Qualification Standards II (MQS II) for lieutenants.

This particular incentive involves a series of 16 tactical problems that have been developed to give the young lieutenants a greater breadth and depth of tactical knowledge and experience. These problems are much like the "What Now, Lieutenant?" series, which was conceived by Major General Harold F. Stone a few years ago at Fort Lewis, in that they cover actual combat actions. (See INFANTRY, May-June 1981, pages 24-26.)

The objectives of the program are to reinforce the students' knowledge of how to think, give them more experience in writing fragmentary orders (FRAGOs) and operations orders (OPORDs), and help prepare them mentally for the possibility of becoming company commanders within days or weeks of entering combat.

The stated purpose of IOBC is "to develop an infantry lieutenant skilled in weapon systems, equipment, leadership, and tactics, and in training subordinates to maintain, operate, and employ weapons and equipment in combat." The tactical problems that are used contribute to this development and also meet several of the IOBC's mission essential tasks—to produce infantry lieutenants who are sound in infantry tactics, from individual to platoon level; who are conversant with rifle company operations; and who are clear and articulate in writing and speaking, especially in preparing and issuing combat orders. The degree to which the problems help, of course, is largely dependent upon the time and effort the platoon cadre puts into them.

CADRE

An IOBC platoon cadre normally consists of one captain, one sergeant first class, and one staff sergeant, and they usually supervise 35 to 40 students. In this particular program, the captain grades the work and leads the discussions, and the noncommissioned officers, with assistance from the cadre manual, highlight principles from their own years of experience.

STANDARD DISCUSSION POINTS

1. Mission/Intent Two Levels Up.
2. Main Effort.
3. Rehearsals/Battle Drills.
4. Reconnaissance (Physical, Map).
5. Know Your Enemy.
6. Know Yourself.
7. Be Creative, Unpredictable.
8. Reserves.
9. Courses of Action (Wargaming).
10. Risk.
11. Depth.
12. Initiative.

Example 1

The cadre manual contains all of the problems that should be presented to the students as well as specific aids to the cadre. One such aid, for example, is the recommended sequence of the tactical problems. Thus, in the 16-week IOBC program, only FRAGO problems, two per week, are used until the formal OPORD instruction is given in Week 4. Afterwards, one a week may be used, except for the weeks the students spend entirely in the field. Another aid is a list of 12 standard discussion points (see Example 1) to supplement the specific discussion-point sheets.

A typical tactical problem normally has a requirement/sketch map sheet, a historical result sheet, and a specific discussion-point sheet. The combat actions used for the problems are drawn from World War I, World War II, the war in Korea, and the Arab-Israeli Wars. In some cases, division examples have been converted into battalion or task force problems, but they retain their application to AirLand Battle principles.

For each problem, the lieutenants are given a handout that includes a sketch map, the particular situation, and the requirements (Example 2). The situation consists of forces available, information on the enemy, and a mission. The requirements include showing the locations of the main attack, the supporting attack, support by fire positions, objectives, defensive positions, and the like. Enough information is provided to enable the officers to display the plan on the map. Finally, each lieutenant must

write a FRAGO or some portion of an OPORD. He may have as little as 30 minutes to complete a problem with a FRAGO or as much as several days for a more complete order.

These tactical problems put each lieutenant into the role of platoon leader (two times), company commander (five times), and battalion commander (nine times). Each commands both light forces (seven times) and mechanized forces (nine times). He gains knowledge about integrating A-10 aircraft, attack helicopters, artillery, mortars, M113 APCs or Bradley fighting vehicles, and M60 or M1 tanks on the combined arms battlefield. He is also exposed to the operation of specialized units—Rangers on a raid, for example.

SOLUTIONS

The solutions are graded on the feasibility of the plans and the clarity and conciseness of the FRAGOs or OPORDs. The tactical problems are then returned to the lieutenants along with copies of the historical result (Example 3), which normally includes a sketch or a map with the narrative of what actually happened. Each tactical problem is then discussed during time allocated to the cadre, or it is used as hip-pocket training.

To guide the discussion, the cadre members use a specific discussion-point sheet (Example 4), the standard discussion points, and notes on the mistakes most commonly made by their students. The standard points stress the tenets of the AirLand Battle and other areas that are important in the development of tactical proficiency. The best results come when selected students are asked to read their plans and orders and carry the discussion or critique while the cadre uses the discussion points (specific and general) as prompts.

The benefits of this program, as identified by the lieutenants themselves, cover a wide spectrum. It gives each lieutenant 16 more opportunities to prepare a FRAGO or OPORD beyond the three or four he

TACTICAL PROBLEM #4

DUE_____ NAME_____

SITUATION: A reinforced OPFOR battalion is dug in and in control of villages L, P, V, C, and K (see map). You are a battalion (task force) commander with three light infantry companies reinforced with four tank platoons and a company of TOWs. You have local air superiority and have A-10 ground attack airplanes and Apache attack helicopters on call. Your mission is to destroy enemy forces vicinity village V in order to open up the road network around village V. At 0640 today you attacked with two groups (North: 1 infantry company, 1 tank platoon, and 1 TOW platoon; and East: 2 infantry companies, 1 tank company, and 2 TOW platoons) and seized every village except village V. You have just reorganized and are preparing to execute the final attack at 1200 hours. At 1145 hours you receive a report from air reconnaissance that an OPFOR battalion is moving toward village V and will arrive in two hours. How will you deal with this new threat and still accomplish your mission?

REQUIREMENT:

a. List four possible solutions to the problem (courses of action). State each one in as few words as possible.
b. Choose one of your four options and explain in one-half page or less why you think it is the best one.
c. Write the oral FRAGO you would give to the commanders to execute your choice.

Example 2

HISTORICAL SOLUTION
Tactical Problem #4

COMBINED ARMS TRAINING ATTACK 22 February 1942 Russia

Attack by the German 6th Panzer Division on the Eastern front, taken from "Small Unit Tactics, Part IV, Unusual Situations," by Erhard Raus, Generaloberst a.D., 1954 (MS# P-060g).

Three possible courses of action were presented to General Raus:

1. To annihilate the fresh Russian forces by means of Luftwaffe and continue the attack.
2. To contain the Russians at V with some forces and then attack the new Russian force with the bulk of forces.
3. To withdraw to a line extending from the woods to the northeast through village M to village C and there assume defensive positions.

ACTUAL ORDER GIVEN BY GENERAL RAUS:

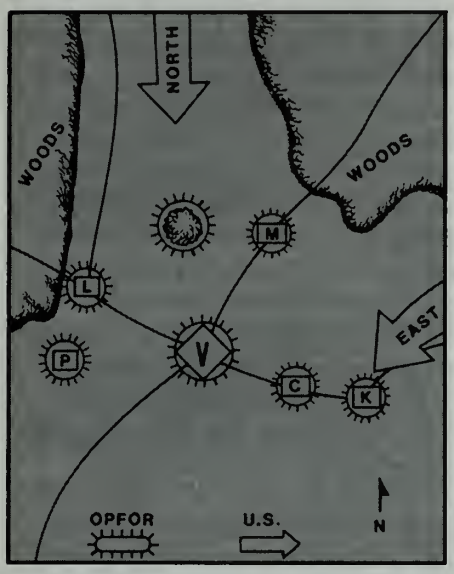
The line reached so far will be held and the enemy troops who are advancing towards V from the south will not be hindered in any way. You will strike only if they attack your positions or attempt to bypass them. If, as expected, they march into V, you will close the gap behind them at the sector boundary between the two groupments and prevent all enemy troops from breaking out of the encirclement. It is contemplated to annihilate the new Russian troops together with the Russian forces occupying V by means of the concentric attack planned originally. The attack will probably start at 1500, and you will wait for instructions to this effect.

Example 3

DISCUSSION POINTS
Tactical Problem #4

- Courses of action (wargaming).
- Know your enemy. For example, what is in a Soviet battalion? (See FM 100-2-3).
- How will your course of action be affected if the reinforcing battalion is a tank? A BTR? A BMP?
- Know yourself. Where would a light infantry battalion get TOWs and tanks?

Example 4



has during the tactical field exercises. By acting as company and battalion commanders, the lieutenants are better able to understand how they, as platoon leaders, will fit into the "bigger picture" and how they will be able to use a commander's intent to guide their own planning process. They learn the importance of knowing the enemy and anticipating events with a limited amount of intelligence information. They seek creative ways of accomplishing the mission while learning the difference between risk and gamble. But the remark heard most often is that they are learning while being challenged and having fun.

Most of the lieutenants keep their tactical problems, and take them to their units. There the problems can easily be used to reinforce and expand upon what the IOBC program covered. With a small investment in time and effort, a unit could develop many additional problems to use in its professional development classes for both officers and NCOs.

Obviously, these problems are not substitutes for leading a platoon during Reserve Component annual training, in a hot MILES battle at the National Training Center, or in actual combat. But along with a good study program in military history (plus MQS II), this program will give lieutenants added experience in judgment and planning, along with confidence in their own ability to make decisions and write orders.

Captain Stephen A. Johnson served as an IOBC platoon trainer for two years. He is now S-4, 3d Battalion (OCS), 11th Infantry at Fort Benning. He is a 1981 ROTC graduate of the University of Oklahoma.

TOW HMMWV Position

CAPTAIN MARTIN N. STANTON

All non-mechanized infantry units in the U.S. Army are now equipped with the HMMWV (high mobility multipurpose wheeled vehicle) TOW carrier in their TOW platoons and companies. This vehicle is a departure from the previous equipment of the non-mechanized TOW squads in that the squad now travels in one vehicle instead of two (TOW jeep and missile carrier jeep) and the TOW HMMWV has some Kevlar protection from shrapnel. It is the latter characteristic that offers several possibilities for the employment of this vehicle that were formerly not available to non-mechanized TOW squads.

Previously, with the M151 TOW jeep the TOW squad was faced with two options—shoot and scoot (that is, fire and displace) or dismount the system from the carrier and build a fighting position that would protect the squad from indirect fire. The problem was that if the squad remained mounted it was vulnerable to all forms of direct and indirect fires. (Literally the only way to survive was not to be where the enemy was shooting.) If the squad did dismount and dig a fighting position, it usually stuck up above ground so far that it was an obvious target for direct fire, and this negated whatever protection against shrapnel it may have offered.

The TOW HMMWV, with its Kevlar top and run-flat tires, is somewhat better protected from indirect fire than the M151, but the personnel and the TOW system of the TOW HMMWV squad are still vulnerable to indirect fire. The vehicle itself still needs additional protection to improve the crew's artillery survivability, but it does give the crew members an option they did not have with the M151—they can dig the entire vehicle in so that the TOW system can engage targets without any other part of the vehicle being exposed.

Digging a TOW HMMWV fighting position requires slightly less effort than digging in an M113. That is, it is as wide (a dozer blade width) but not quite as deep. The basic position must allow for missile clearance when the TOW is launched (Figure 1). Observation of sector is conducted from the vehicle itself. (If constructed to standard, this position still

has the two-foot-high silhouette of the gunner and the TOW system itself, which must be camouflaged with vegetation or blinds.)

Another possibility is a split-level fighting position that has a complete hide position and a ramp that allows the TOW HMMWV to move up to the firing position (Figure 2). This type of position requires a place for a dismounted observer to observe the squad sector while the vehicle is in the hide position. It also must have a vehicle stop stake to ensure that the driver stops in the exact position from which the range card data was drawn. This stake should have a small amount of illumination on it so the driver can see it at night. (This can be white paint, luminous tape, or a small chemlite.)

Obviously, this is a more complex position. Its advantage is increased artillery protection for the system because of the deeper hide position. Its disadvantages are an inability to track or scan the sector with the system while the vehicle is in the hide position. In addition, if it is to be successful, a squad must rehearse driving the vehicle up to the firing ramp, acquiring the target, and engaging it.

OVERCOME

The disadvantages can be overcome through such basic steps as positioning an observer in the daytime and moving the vehicle up to the firing ramp at night in order to observe through the nightsight.

Other considerations for a TOW HMMWV fighting position include the field expedient hardening of the vehicle to protect it against shrapnel. This can be done by placing sandbags on top of the vehicle's most vulnerable points—engine compartment, troop compartment, and hoods. Armor plate and skirting salvaged from derelict armored vehicles can also be used, and all windows should be removed from the vehicle to prevent the secondary missile hazard of broken glass. The additional armor is basically intended to prevent or lessen shrapnel damage to the vehicle while it is in the fighting position; it does not matter if it falls off when the vehicle leaves the position.

To make it easier for the gunner to acquire targets in his sector, engineer tape can be laid from the base of the TOW along the roof of the HMMWV to the edge of the vehicle along the TOW's primary direction of

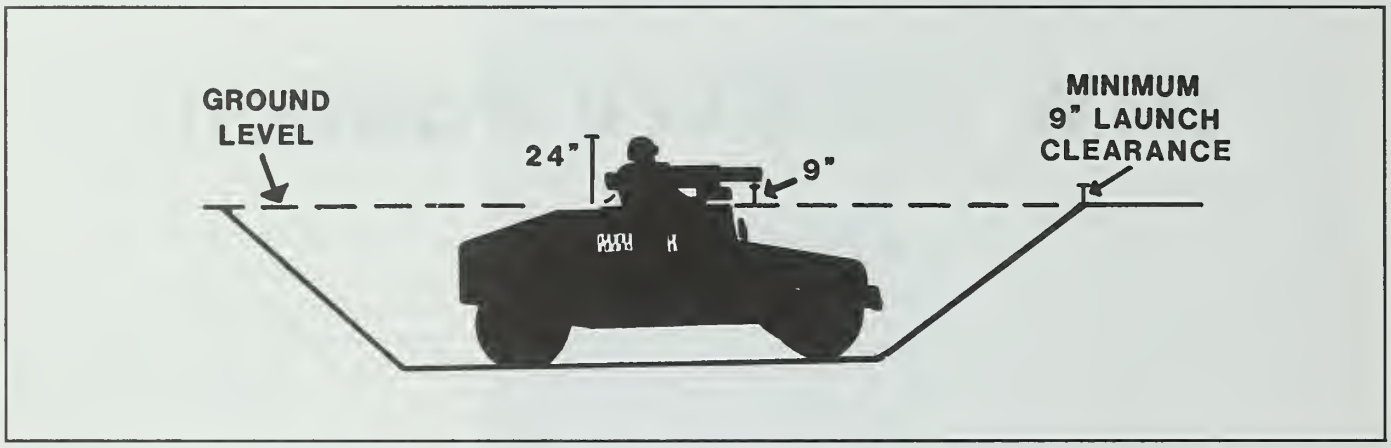


Figure 1. Basic vehicle fighting position.

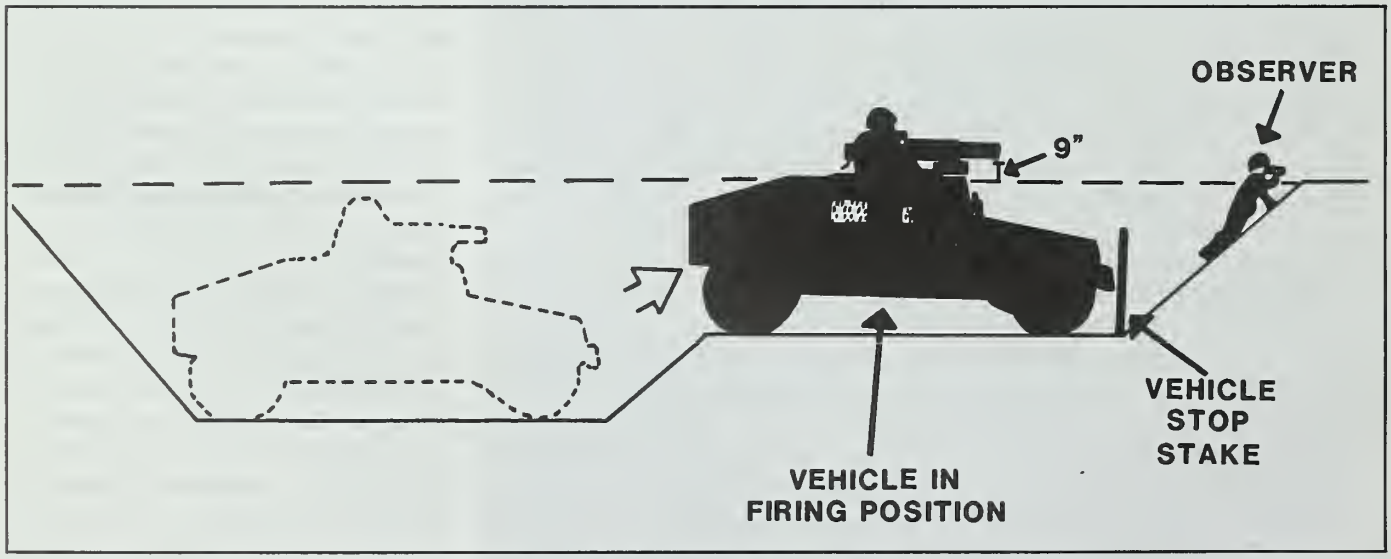


Figure 2. Split level vehicle fighting position.

fire. This allows the gunner to reference his principal direction of fire quickly at night by aligning the tube of the TOW system directly over the white tape.

Another technique is to put out two chemlites in line with the principal direction of fire. This permits the gunner to line the two up in his day sight and be on his principal direction of fire. Of course, the chemlites should be half buried and shielded from enemy observation.

To date, not much has been written about the employment of the TOW HMMWV. It is up to the members of the units equipped with this weapon system to start contributing to the body of knowledge on it. This is one suggestion, one technique. Let's hear some others.

Captain Martin N. Stanton, an Infantry officer, is S-3 of the light infantry observer-controller team at the National Training Center. He previously led rifle and TOW platoons in Korea and commanded the combat support company, 2d Battalion, 2d Infantry at Fort Lewis. He is a 1978 graduate of Florida Institute of Technology.

SWAP SHOP

The little pouch that holds the lensatic compass is secured to your LC-1 suspenders by only one ALICE clip, so it tends to flop around and get stuck on twigs and bushes. You can add elastic bands to the pouch to secure it, but the bands close up when the compass is removed, making it hard to return the compass after use. In addition, the pouch cannot be worn on the suspenders when they are worn under the PASGT (personnel armor system ground troops) flak jacket.

Like binoculars, a compass is an item that has to be ready when it is needed and easily tucked out of the way when it is not. It cannot be left dangling around your neck or tied to the pocket of your camouflage jacket. But it cannot be stashed in your butt pack either, because you need it too often. The truth is that the little compass pouch does not belong on the LC-1 suspenders (or on the cartridge belt, either).

This problem can be solved by attaching the lensatic compass to one of the hand grenade pockets on the side of the M16 magazine pouch. This way, it will be ready for immediate use and then can be tucked away in a secure place.

To connect it, open one of the grenade straps on the pouch. Then take your compass lanyard and run it through the center of the grenade pouch (Figure 1). Grab the end of the lanyard and open it so the compass can be run through it (Figure 2). Pull the lanyard tight. Now the compass is secured to the pouch flap. At this point, simply wrap the lanyard around the closed compass and place it snugly inside the grenade pouch. Then close the retaining strap over it for extra protection (Figure 3).

Carrying it on the magazine pouch, you can even stop and kneel to orient your map and compass or to do other map and compass work without having to remove it. If you wear it around your neck, you have to take it off or disconnect it from your pocket to do this.

Some may argue that you will lose one hand grenade, but how many times do you carry four grenades anyway? Since a hand grenade is a one-way item, you can keep a fourth one in your flak jacket pocket, or in another uniform pocket.

Although the M16 magazine pouch is more open than the compass pouch, the compass is encased in a solid body and a little dirt won't kill it. It will be protected far better in the magazine grenade pouch than in the compass pouch worn on the shoulder straps where it is exposed to snagging and potential destruction.

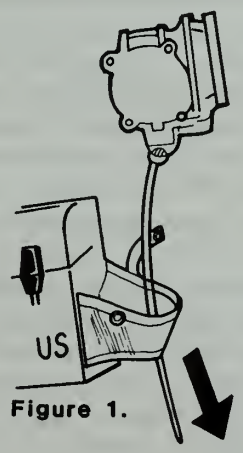


Figure 1.

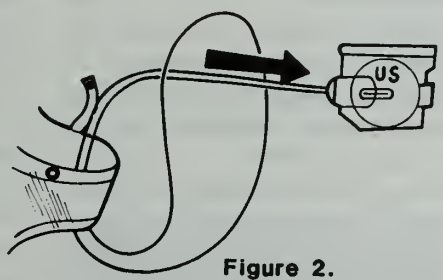


Figure 2.

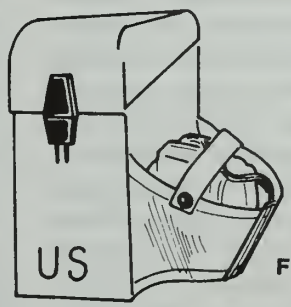


Figure 3.

(Submitted by Mike Sparks, U.S. Marine Corps Reserve, Forest, Virginia.)

ENLISTED CAREER NOTES

AIRLAND BATTLE TRAINING

AirLand Battle doctrine requires that soldiers be highly trained in all areas of operation for current and future battlefields. To be successful in battle, enlisted soldiers must be proficient in battlefield operations and prepared to serve in positions within the tactical operations center (TOC).

Two training courses have been developed that are designed to instruct NCOs in AirLand Battle doctrine:

The Joint Firepower Course. This course is designed to prepare NCOs for assignment to staff operations positions at all levels. The course of instruction focuses on joint approved concepts, procedures, techniques of combat operations, and the coordination and control systems involved in the AirLand Battle.

Students from the Army attend the first two weeks of the three-week course. (The third week is designed for Air Force personnel assigned to tactical air control parties (TACPs).) This training concentrates on planning and coordination within the tactical air control system/Army air-ground system (TACS/AAGS) at brigade and battalion level.

The course is for soldiers in the rank of sergeant and above.

The Battle Staff Course. This course is designed to give NCOs a fundamental understanding of tactical battle management functions within the TACS/AAGS, and the principles of exploiting Air Force and Army capabilities in the AirLand Battle.

Emphasis is placed on planning and on the management of theater air and land resources; the systems and procedures used to control joint forces; command, control, and communications countermeasures; and the information required to support decision making.

The course consists of a demonstration and exercise phase that employs dedicated TACS equipment during an air-ground operations system joint exercise. During the exercise, the students function in various positions within the TACS/AAGS organizational structure.

To be eligible for this course, soldiers must be in the ranks of sergeant first class/platoon sergeant and master sergeant/first sergeant or assigned to G-3 or G-2 sections.

Both of these courses are conducted at Hurlburt Field, Florida; NCOs are normally scheduled to attend in a TDY enroute status.

Any eligible NCO who is interested in attending either course is encouraged to submit a request using DA Form 4187. Questions regarding the courses may be directed to Infantry Branch, Total Army Personnel Agency at AUTOVON 221-8056 or commercial (202) 325-8056.

INFANTRY ANCOC

The Infantry Advanced Noncommissioned Officer Course (ANCOC) is conducted in a live-in environment at the NCO Academy at Fort Benning.

To be eligible to attend, an NCO must meet the following criteria:

- Must be a staff sergeant or sergeant first class.
- Must be selected by an SFC/ANCOC selection board.
- Must meet the physical fitness and weight standards outlined in AR 305-15 and AR 600-9.
- If over 40 years of age, must complete medical screening and be cleared to take the Army Physical Fitness Test before attending the course.
- Must either have a secret clearance or initiate the process to obtain it.

Now that ANCOC is a prerequisite for promotion to master sergeant, the importance of completing the course successfully cannot be overemphasized.

ROTC AND RESERVE COMPONENT ADVISOR ASSIGNMENTS

Because of the large turnover in the personnel assigned to ROTC, National Guard, and Army Reserve advisor positions, the Infantry Branch at TAPA is looking for qualified NCOs in the ranks of SFC/PSG and MSG/1SG who are coming from overseas assignments to fill these positions.

An NCO who wants to apply for assignment to one of these positions should refer to Chapter 8, AR 614-200, Selection of Enlisted Soldiers for Training and Assignment, and contact his unit personnel representative or his Infantry career advisor at AUTOVON 221-8056.

BNCOC FOR STAFF SERGEANTS

Infantry branch at TAPA is responsible for identifying staff sergeants for special command assignments such as recruiting, ROTC, and full-time manning duty. Soon, the prerequisites may have to be changed to read that staff sergeants must be graduates of the Basic Noncommissioned Officer Course (BNCOC) before they can go on most special command assignments.

If a current DA proposal is adopted, soldiers in the rank of staff sergeant will have to be graduates of BNCOC to be eligible for promotion to sergeant first class. This proposed requirement is forcing all special command assignment managers to look for BNCOC graduates. They know that once a staff sergeant is assigned to a

special command, he probably will not be allowed to attend BNCOC because of mission requirements.

Staff sergeants and their chains of command are reminded that BNCOC management for the combat arms will not be centralized at DA. Battalion commanders and command sergeants major will ensure that an order of merit list (OML) is maintained at battalion level and that the "right" soldier receives the "right" training at the "right" time in his career. The prerequisites for placement on an OML are listed in paragraph 5-14(b), AR 351-1.

Staff sergeants who have served in leadership positions and who have completed the schools required for promotion will be selected first for special command assignment.

A soldier's point of contact for the OML or BNCOC attendance is his unit first sergeant or battalion command sergeant major.

PRIOR SERVICE SF SOLDIERS NEEDED

TAPA is interested in recruiting prior service Special Forces soldiers to enlist again for active duty. Former Special Forces soldiers who held the ranks of sergeant through sergeant first class are eligible, and they may return to active duty without loss of rank within 36 months of their separation.

Any eligible former soldier who is interested should contact the Special Forces recruiting team at the Special Warfare Center and School, Fort Bragg, North Carolina. Qualified applicants may call collect at (919) 432-1818, or AUTOVON 239-1818.

SPECIAL FORCES ANCOC

Since it is now a separate branch, Special Forces has developed its own Advanced Noncommissioned Officer Course (ANCOC). Previously, a soldier attended the ANCOC that was aligned with his SF MOS: An MOS 18B soldier attended 11B ANCOC, an 18C, 12B; an 18D, 91B; and an 18E, 31V.

The program of instruction of the new SF ANCOC consists of both a core curriculum and specific MOS-related training. The first course began on 2 October and will end on 9 February 1989. In order to balance the student population of the course, the class seats will be equitably distributed among all of the CMF 18 MOSs.

The Special Warfare Center and School will run three iterations of this course each year with a total annual seat requirement of 115 students.

Soldiers who are selected to attend will be scheduled on a TDY and return or a TDY enroute basis according to the following priority: Sergeants first class, promotable staff sergeants, and staff sergeants.

DRILL SERGEANT POLICIES

An upcoming change to Army policy will allow soldiers in overseas areas to volunteer for drill sergeant school about three months earlier than is now permitted.

Current procedures contained in DA Pamphlet 600-8, Management and Administrative Procedures, require overseas soldiers to submit volunteer applications between 8 and 11 months prior to DEROS (date eligible to return from overseas). Many of the volunteer applications received cannot be approved because soldiers are already on assignment instructions for another installation or, in some cases, the drill sergeant vacancies have already been filled by the time the applications reach TAPA.

The policy change will require that volunteer applications be submitted so as to arrive at TAPA between 10 and 14 months before the soldiers' dates of return, and this will increase their chances of approval. The new policy will be added to AR 614-200, Selection of Enlisted Soldiers for Training and Assignment.

The priority for drill sergeant fill is soldiers who are stationed at drill sergeant installations and those who are returning from completed overseas tours (whose DEROS is July 1989 or later). TAPA will not curtail a soldier's overseas tour for the sole purpose of sending him to drill sergeant school. CONUS to CONUS moves for drill sergeant school or assignment are authorized only when absolutely necessary to keep drill sergeant strength at 100 percent.

The criteria for drill sergeant school are contained in paragraph 8-17, AR 614-200. Soldiers who want more information should contact their personnel staff NCOs or military personnel offices.

MORE PAY FOR DRILL SERGEANTS

Active Army drill sergeants began receiving more special duty assignment pay (SDAP) in September 1988. With the new increase, drill sergeants with 0-6 months in that status receive $165 per month; those with 7-12 months receive $220 per month; and those with more than 12 months receive $275.

SDAP is a monetary incentive that is paid to enlisted personnel who qualify for and serve in designated special duty assignments. It is used for personnel who have extremely demanding duties that require an unusual degree of responsibility or an extraordinary effort for satisfactory performance.

OFFICERS CAREER NOTES

BRANCH CHIEF'S NOTES

As I assume my assignment as the new Chief of Infantry Branch, replacing LTC Buster Hagenbeck, I look forward to serving all the infantrymen in the field to the best of my ability. And I want to make sure that every officer and the members of his chain of command receive the best information available to help him make his individual career decisions.

Of course, the service provided and the career decisions made by Infantry Branch are all intended to support the individual soldier on the ground who is constantly training and preparing to meet worldwide contingency plans. It is clearly our only mission to develop the best trained infantry officers to lead soldiers in combat.

Toward that end, we encourage officers to call and talk to their assignment officers. A directory of Infantry Branch points of contact and their telephone numbers was published in INFANTRY's September-October 1988 issue, page 48. (To update that directory, please note that MAJ Bob Johnson and MAJ Richard Crosby have replaced MAJ Harry Axson and MAJ Rob Smith as lieutenant colonels' assignment managers.)

The future for managing infantry officer assignments remains strongly influenced by constrained resources, continued officer reductions, and Force Alignment Plan III (FAP III). PCS constraints are still very inflexible, with exceptions being made only at the highest levels. This requires better long-range planning on the part of each individual officer and his chain of command. Too often we find ourselves trying to "fix" things after the fact. Instead, we must be proactive and not allow the bureaucracy to dominate.

We need to do a better job of anticipating requirements of all types, and we ask the commanders in the field to help their officers with long-range planning. This planning should always include some options, of course, instead of being locked in on a single track or choice that may not best support *current* Army requirements.

In this regard, we must all work harder on counseling younger officers in Functional Area (FA) designations. We should encourage them to look first at something other than FAs 54 and 41, which are greatly oversubscribed in all Year Groups. We desperately need some of our smart young warfighters to pursue hard skill areas such as FAs 49, 51, 53, and others. These areas will give officers equal opportunity to serve as infantrymen because they will not be as vulnerable for branch-immaterial or combat arms-immaterial positions that are so often filled by FA 54s and FA 41s.

The FAP process is another area in which we need to have the chain of command make specific recommendations for retaining an officer in the infantry. Too often, all we have from the chain of command to help us determine who is to be rebranched is a "recommend approval" and two or three OERs. Commanders know their officers best and need to tell the board in specific detail how they stack up for rebranching.

Attempts after the fact to change FAP decisions have been too numerous, and usually unsuccessful. We are currently rebranching an average of 42 percent of those who are eligible and expect this same number through Fiscal Year 1990 before the branch detail program becomes fully implemented.

In an attempt to improve communication with the field, we have initiated a Branch newsletter, and the first issue should have reached battalion and brigade commanders by now. We are the largest branch by far, and it remains more difficult to dispense timely career management information throughout the infantry population.

We will continue visits to the field, but these will most often be linked to OPMD trips and will include only one or two infantry branch representatives. We ask that commanders continue to contact us at any time for clarification of any issue that may be causing concern or confusion for them or their officers.

Finally, we are here to serve you—the infantry officer in the field. Your assignment officer works hard to satisfy any and all reasonable requests. We are committed to ensuring that ever-changing Army requirements are met with the right officers, in the right jobs, at the right times.

LTC JACK HOOK

CHANGE TO CVI SELECTION

Effective with the Army captains promotion board that convened on 7 September 1988, the policy for selecting Army competitive category officers for conditional voluntary indefinite (CVI) status has changed.

Beginning with this board, any "other than Regular Army" (OTRA) officer who is eligible for consideration for promotion (either in the promotion zone or above the zone) will automatically be considered for CVI status. If recommended for promotion to captain, an officer will concurrently be recommended for CVI status. OTRA officers in the zone of consideration for future captain promotion boards will *not* be required to apply for CVI status.

Officers recommended for CVI sta-

tus will be notified of their pending change to conditional career status at the same time they are notified of their selection for promotion to captain and will be required to execute a statement of acknowledgement.

Policy concerning the "rebranching" of OTRA officers will not change in Fiscal Year 1989. OTRA officers in overaligned branches who were selected for CVI status by the September 1988 board were considered for realignment to underaligned branches by a separate rebranching board held in October.

Commanders are encouraged to actively involve themselves in counseling their officers concerning branch preferences.

USMA INSTRUCTOR PROGRAM

Infantry Branch is constantly seeking qualified officers to serve as instructors and tactical officers at the United States Military Academy. Officers selected as instructors normally pursue fully funded advanced degrees from civilian institutions before arriving for duty at West Point.

The key to planning a West Point assignment is timing. It will take an officer two years to complete an advanced degree, followed by a tour of three or four years at West Point. This means an officer must make a commitment of five or six years for one assignment. Certainly an assignment of this length requires special consideration and careful planning.

Infantry Branch targets branch-qualified captains in certain year groups to report to USMA at specific times. Currently, officers in Year Group 1982 are being targeted to begin advanced civil schooling in August 1989 with a reporting date in August 1991.

The philosophy behind targeting particular year groups is to ensure that an officer has enough time following a West Point assignment to go to the Command and General Staff College (if selected) and then "return to troops" as a major.

A point that constantly needs to be stressed to officers in the field is that instructor duty at the Academy is not just for USMA graduates. The faculty at West Point encourages officers who were commissioned through ROTC and OCS to apply for the instructor program.

More information is available from Captain Steve Barclay at Infantry Branch, AUTOVON 221-5973/5596.

RC JUNIOR LEADERSHIP SEMINARS PLANNED

The U.S. Army Reserve Personnel Center (ARPERCEN) is planning a series of professional development seminars for junior officers (lieutenants, captains, and warrant officers in grades 1 and 2) to be offered several times annually at various locations.

In January of each year, a four-day seminar will be held in Washington in conjunction with the mid-winter meeting of the Reserve Officers Association (ROA). In June, another four-day seminar will be held in conjunction with the ROA's national convention, the location of which varies each year. At other times during the year, one-day seminars will be co-sponsored with major U.S. Army Reserve Command headquarters located around the country.

The seminars will address a variety of subjects useful to junior officers, including promotions, protocol, the Active Guard Reserve (AGR) program, records management, evaluations, and training.

Travel and temporary duty costs for officers who are members of Army Reserve troop program units (TPUs) must be funded by their units' chains of command.

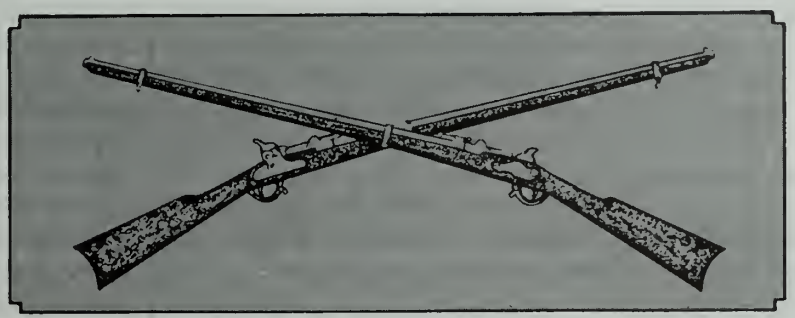
More information is available from personnel management officers at ARPERCEN; from LTC Alan Sepe at 1-800-325-4957 (AUTOVON 693-7844); or from MAJ Ed Baldwin at 1-800-325-4387 (AUTOVON 693-7431).

CAS³ UPDATE

Fiscal Year 1989 has brought about a major change for officers planning to attend Phase II of the Combined Arms and Services Staff School (CAS³) enroute to their next duty assignments.

CAS³ is a temporary duty and return school. Only those officers who have orders to Korea or to advanced civil schooling may attend CAS³ enroute to their next duty assignments. Infantry captains in Year Groups 1980-1982 should check to make sure their units have them scheduled to attend Phase II during Fiscal Year 1989. Year Group 1979 officers who have not attended Phase II now must have a waiver to do so.

More information is available from CPT Thomas Schoenbeck at Infantry Branch, AUTOVON 221-5596/5520.



BOOK REVIEWS

The Army's Center of Military History should be roundly applauded for bringing back in facsimile reprint format a series of volumes on the World War I era. These books were originally published between 1931 and 1949.

The first five volumes in the series—titled the *Order of Battle of the United States Land Forces in the World War*—are now available from the Superintendent of Documents. The five volumes are subtitled as follows:

• VOLUME 1, AMERICAN EXPEDITIONARY FORCES: GENERAL HEADQUARTERS, ARMIES, ARMY CORPS, SERVICES OF SUPPLY, SEPARATE FORCES (USGPO S/N 008-029-00164-1. 1988. 412 Pages. $21.00).

• VOLUME 2, AMERICAN EXPEDITIONARY FORCES: DIVISIONS (USGPO S/N 008-029-00165-9. 1988. 451 Pages. $22.00).

• VOLUME 3, PART 1, ZONE OF THE INTERIOR: ORGANIZATION AND ACTIVITIES OF THE WAR DEPARTMENT (USGPO S/N for all three parts of Volume 3 is 008-029-00166-7. 1988. 547 Pages. Price for all three parts is $36.00).

• VOLUME 3, PART 2, ZONE OF THE INTERIOR: TERRITORIAL DEPARTMENTS, TACTICAL DIVISIONS ORGANIZED IN 1918, AND POSTS, CAMPS, AND STATIONS (1988. 1,002 Pages).

• VOLUME 3, PART 3, ZONE OF THE INTERIOR: DIRECTORY OF TROOPS (1988. 1,593 Pages).

Another interesting publication from the Center is one published jointly with the Office of Air Force History. It is A PATTERN FOR JOINT OPERATIONS: WORLD WAR II CLOSE AIR SUPPORT, NORTH AFRICA, by Daniel R. Mortensen (USGPO S/N 008-029-00161-6. 1987. 104 Pages. $5.50, Softbound). This is one of the first studies ever done on the origins of modern close air support practices during World War II.

The Office of History, U.S. Army Corps of Engineers, has also sent us some publications that infantrymen should find of considerable interest:

• PUT 'EM ACROSS: A HISTORY OF THE 2d ENGINEER SPECIAL BRIGADE, 1942-1945 (A 1988 facsimile reprint of the 1946 edition, which was printed by a commercial house. USGPO S/N 008-022-00246-4. 278 Pages. $20.00, Softbound).

• THE NATION BUILDERS: A SESQUICENTENNIAL HISTORY OF THE CORPS OF TOPOGRAPHICAL ENGINEERS, 1838-1863, edited by Frank N. Schubert (USGPO S/N 008-022-00248-1. 1988. 81 Pages. $2.75, Softbound).

• HOLDING THE LINE: THE 51st ENGINEER COMBAT BATTALION AND THE BATTLE OF THE BULGE, DECEMBER 1944 - JANUARY 1945, by Ken Hechler (USGPO S/N 008-022-00247-2. 1988. 66 Pages. $4.50, Softbound).

We have also received a number of other recently published books we think you should know about:

• GERMAN TANKS OF WORLD WAR II, by George Forty (Sterling, 1988. 160 Pages. $24.95). This book resembles in its layout and design the author's 1983 book on U.S. tanks in World War II. In this one, the author describes the design and construction of all of the German tanks of the World War II era, and spices his narrative with many excellent photographs and numerous accounts of individual tank engagements.

• WORLD WAR II THROUGH GERMAN EYES, by James Lucas (Sterling, 1987. 192 Pages. $24.95). Basing his narrative on extensive research and interviews with men and women who lived through the pre-war and war years in Germany, the author shows what the German people themselves thought of their leaders, their armed forces, the death camps, their enemies, and the conduct of the war. One of the most important points the author makes is that "Hitler commanded the loyalty of the great mass of the German people. They trusted him to produce even at the eleventh hour some wonder weapon, some political miracle which would win the war and justify the losses which had been endured and the sufferings which they had had to undergo."

• THE ATLAS OF AMERICAN HISTORY, by Robert H. Ferrell, cartography by Richard Natkiel (Facts on File, 1987. 192 Pages. $24.95). This is an outstanding reference work, with some 200 maps supporting a book-length text that reconstructs our entire history. In addition, the book contains numerous statistical tables, graphs, charts, more than 100 paintings, drawings, and photographs, and a comprehensive index.

• ENTER THE DRAGON: CHINA'S UNDECLARED WAR AGAINST THE U.S. IN KOREA, 1950-1951, by Russell Spurr (Newmarket Press, 1988. 384 Pages. $22.95). A different sort of history is presented in this book, primarily because the author, a well-known foreign and military correspondent, gives us a look at the Chinese side of the Korean War. This is not a detailed history of that war, but it does make interesting reading. A reader has to wonder, though, how the Chinese soldiers the author interviewed were able to recall with such exactness their 30-year old conversations.

• MAJOR DEFENSE SYSTEMS PRODUCERS—USA 1988, edited by R. Noyes and D. J. DeRenzo (Noyes and Summerville, Mill Road at Grand Avenue, Park Ridge, NJ 07656. 1988. 380 pages. $96.00). This guide outlines the activities of the 208 top defense system producers in the United States. The firms are organized alphabetically by parent company, with all divisions, subsidiaries, and affiliates included under their parent companies. A separate listing shows the five important nonprofit federally funded research and development centers.

• WEAPONS AND WARFARE: CONVENTIONAL WEAPONS AND THEIR ROLES IN BATTLE, edited by Major General Ken Perkins (Pergamon-Brassey's, 1987. 272 Pages. $37.50). Eleven eminent authorities express their personal views on the future of such diverse subjects as helicopters and fixed wing aircraft, tank warfare, mortar and artillery systems, small arms, and electronic warfare.

• THE DICTIONARY OF BATTLES, edited by David Chandler (Henry Holt, 1988. 256 Pages. $24.95). Seven writers lend their narrative and historical skills to this very fine reference book. Each writer singles out the crucial battles and campaigns that occurred during the particular periods of world history about which they are writing. Special maps and battle plans complement the narratives, which contain far more than simple battle histories.

• WHO WAS WHO IN THE CIVIL WAR, by Stewart Sifakis (Facts on File, 1988. 766 Pages. $45.00). The author is a journalist and long time Civil War buff. In this book he offers 2,500 concise biographical sketches of all 583 Union and 425 Confederate officers who achieved the rank of general officer, as well as officers of lesser rank, soldiers who distinguished themselves in battle and civilians who contributed to their causes. Naval officers are also included.

Now here are some of our longer reviews:

THE AMERICAN EXPERIENCE IN VIETNAM. By Clark Dougan, Stephen Weiss, and the Editors of the Boston Publishing Company (W. W. Norton, 1988. 352 Pages. $39.95). Reviewed by Doctor Joe P. Dunn, Converse College.

This is probably the best of more than a dozen single-volume pictorial histories of the Vietnam War currently in print. Written and edited by the same team that produced the 25-volume illustrated history *The Vietnam Experience*, it covers the war from the mid-1950s through the fall of Saigon and the Vietnam Monument.

As with all the books in the earlier multi-volume series, it combines excellent text with fascinating and illuminating pictures, most full-page and in color. Each of the eight units includes an interview with an eyewitness to the events highlighted.

If one surveys the extant pictorial histories, the same pictures—in many cases classics of the war—surface in each volume. But this particular volume for the most part uses photographs not previously published. It is an eclectic collection that includes scenes from basic training, combat of all kinds, day-to-day life away from the field in Vietnam, the anti-war movement at home, POWs, and much more. The text is succinct, balanced, and interesting.

Although this is a fine product, its price will limit its purchase predominately to libraries or those who collect such volumes. This is a shame since the book is quite useful for the lay reader.

THE FALL OF THE ROMAN EMPIRE: THE MILITARY EXPLANATION. By Arther Ferrill (Thames and Hudson, 1986. 192 Pages. $22.50). Reviewed by Leroy Thompson, Manchester, Missouri.

Analyzing the reasons for the fall of the Roman Empire has been a pastime among historians since Edward Gibbon penned his great work 200 years ago. The tendency, however, has been to pay more attention to the social reasons for Rome's decline than to the military ones. Not so for Arther Ferrill, who concentrates his attention on certain changes in the Roman military system that he feels precipitated Rome's demise.

This book should prove useful to those who read widely in ancient military history as a stimulus to their thinking about the points the author raises; it should prove equally useful to readers who do not have the same background—they will find that the book provides a useful overview of the military history of the later Roman Empire.

Ferrill begins by discussing various other theories that have been advanced for Rome's decline and then gives his own beliefs. He tells of the major operations and battles of the period and relates them to Rome's decline. He feels, for example, that the battle of Adrianople was of critical importance because of the loss of a large number of highly trained Roman soldiers who could not be replaced.

But he believes that the two primary military factors that caused Rome's fall were the large number of barbarians taken into the army and the shift away from strongly defended borders backed by a few mobile legions toward a policy of maintaining a large central reserve with only a few units on the borders.

All in all, I recommend this book most highly, and particularly to those readers who are interested in the study of grand strategy.

U.S. MARINES IN VIETNAM: VIETNAMIZATION AND REDEPLOYMENT, 1970-1971. By Graham A. Cosmas and Terrence P. Murray (History and Museums Division, U.S. Marine Corps, 1986. 487 Pages $22.95). Reviewed by Doctor Mike Fisher, Kansas State University.

This volume is the fifth in a planned series of ten that will tell the official history of the Marine involvement in Vietnam. It covers the last 18 months of operations in the I Corps area, which consisted of the five northernmost provinces of South Vietnam.

The authors relate in detail the problems and successes the III Marine Amphibious Force (MAF) had during this troubled period of the war in an area in which some of the war's most severe and sustained fighting had taken place. The full effect of the U.S. decision in 1969 to reduce our national effort and disengage our military forces in South Vietnam at a moment when many military analysts believed tactical victory was near at hand evolves from this lengthy and detailed historical analysis.

Writing from the III MAF's perspective and working essentially from official Marine Corps records and the official records of the other military services, the authors recreate the frustration and hardship the Marine units met in trying to conduct what was essentially guerrilla warfare. Especially noteworthy is the authors' candid treatment of the social and racial problems that beset the Corps in South Vietnam at this time. The ferment of a nation divided generated a set of problems that taxed the ingenuity and resourcefulness of every infantry commander during what the Marines have continued to call the "time of troubles." In fact, the section of the book on morale and discipline might well serve as required reading for all small unit commanders who are faced with the prospect of leading unseasoned troops into battle during an unpopular war. Today's squad and platoon leaders can also profit from the detailed account of the small unit tactics used by the Marine units as they contested terrain that was familiar to the enemy. That enemy was often able to concentrate superior numbers and overwhelming firepower against them at the point of initial contact.

Despite the cost—total Marine casualties in Vietnam exceeded even those suffered by the Corps during World War II—most of the Marines performed with a dedication and pride their countrymen in the United States might well have emulated. These same words could be applied to the countless small Army units that fought at Dak To, Junction City, and the hundreds of other forgotten paddies, trails, and "villes"—places where young American infantrymen distinguished themselves during our country's longest and most divisive war.

FORGED BY FIRE: GENERAL ROBERT L. EICHELBERGER AND THE PACIFIC WAR, by Major John Francis Shortal (University of South Carolina Press, 1987. 154 Pages. $24.95). Reviewed by Major Ned B. Ennis, United States Army.

Ask most readers with a casual interest in the history of World War II to name the U.S. Army generals who fought in the European theater and you will probably get the names of Eisenhower, Patton, Bradley, and Gavin. Ask the same person to name the generals who fought in the Pacific theater and the list usually stops at one—Douglas MacArthur.

The author of this book, an assistant professor of history at the U.S. Military Academy, finally brings well deserved attention to the extraordinary wartime exploits of one of the generals who helped make MacArthur so successful—Robert Eichelberger, commander of the U.S. Eighth Army from 1944 to 1945.

Called the "Fireman of the Southwest Pacific" by the author, Eichelberger was called upon time after time by MacArthur to rescue stalled operations. His first challenge came during the Buna campaign in late 1942 when he was ordered forward to get the 32d U.S. Division moving against the Japanese. The story of how Eichelberger dramatically turned the division around within 48 hours makes inspiring reading for any military reader.

Eichelberger led not only by his brilliant administrative and tactical acumen, but by his example of personal courage as he walked among his attacking infantrymen so they would know he was sharing their danger.

The author also provides valuable insight into the harsh lessons of leadership that Eichelberger learned at Buna—the importance of a realistic and demanding training program; the importance of speed and not allowing a siege mentality to develop; and finally, the importance of a leadership style that emphasized living at the front, sharing the dangers and discomforts with the men, and always leading by example.

Admittedly, the author is pro-Eichelberger at the expense of MacArthur's hallowed reputation. But the facts he presents shed new light on this little known commander who demonstrated a brand of leadership as good as any shown in all of World War II. This is a book that should be read by all who are serious about the study of combat leadership.

AVIATION IN THE U.S. ARMY, 1919-1939, by Maurer Maurer (Office of Air Force History, 1988. 626 Pages. $29.00). Reviewed by Lieutenant Colonel Jack Mudie, United States Air Force, Retired.

The author, a retired U.S. Air Force historian, based his book on the huge amount of source material in the Air Force Historical Research Center—over 370,000 books and bound periodical volumes. He has succeeded admirably in culling this massive amount of data to produce a readable reference book.

He divides his book into three periods: the Air Service (1919-1926), the Air Corps (1926-1933), and the GHQ Air Force (1933-1939). The book opens with the demobilization rush following World War I and closes with the beginning of mobilization for World War II, the reverse of most military histories. In between, he chronicles the efforts of literally a handful of Army aviators to establish air operations on an equal footing with those on land and sea. And he touches on such events as the planes versus ships controversy, the trial of Billy Mitchell, the development of the airway system throughout the country, and the intense secrecy that surrounded the Norden bombsight.

Maurer's writing style makes what might have been rote history a product that is easy to read. Praising the foresight of a number of fliers who later became famous during World

War II is to be expected in such a history, but Maurer also rightfully praises two non-flying generals, Marshall and MacArthur, for recognizing the critical value of airpower in the coming conflict.

This is not a drum-beating myopic piece of airpower propaganda, but an evenhanded account of a fascinating period in U.S. military history that is similar in many surprising ways to the current period. It is well illustrated throughout and the appendixes include lists of government officials and air units to help the reader to follow the text.

The book also has a marvelous portfolio of pictures of the principal aircraft used by the Army, and the extensive bibliography should provide enough references for anyone whose appetite for further knowledge of this particular era has been whetted by this book.

THE TEST OF BATTLE: THE AMERICAN EXPEDITIONARY FORCES IN THE MEUSE-ARGONNE CAMPAIGN, by Paul F. Braim (University of Delaware Press, 1987. 229 Pages. $34.50). Reviewed by Colonel Rolfe L. Hillman, United States Army, Retired.

Those who wear crossed rifles will be pleased to find that the author is a thoroughly qualified infantryman (Paul Braim has a star on his blue badge and served four tours in Vietnam) who has accomplished the publication of a work that earns him admittance into the band of military historiographers.

He selected this subject for his doctoral thesis, mined primary sources in archives, and walked the terrain. By correspondence or interview he has assembled the updated views of a virtual first team of historians of this period. It is the first time we have seen in book form some systematic use of the World War I Survey that was assembled by the Army's Military History Institute at Carlisle Barracks.

The title of the book has immediate attraction because the 47 days of the Meuse-Argonne—and they are certainly the central experience of the AEF—have needed separate and more detailed examination. It is a disappointment to find that Braim found it again necessary to put the campaign in an overall context. Thus, only 56 pages are devoted to the campaign itself and 26 pages to his summary critique under the title "In Retrospect."

We wish that Braim had used his considerable investigative talents to analyze, for example, the decision processes by which divisions were shuffled into and out of line, and to provide a more comprehensive analysis of logistics that came to chaos and of the several instances in which there was a breakdown in command and control up to division level.

The retrospective section seems to be a case of reach exceeding grasp, even though David F. Trask says in his informative foreword that Braim's findings constitute a turning point and that "all future accounts must necessarily depart from this one, a pioneering effort." Whatever the case, the editors did the author a disservice when they allowed him to make pronouncements in phrases that strike the reader as pretentious, if not pompous, such as, "I will now criticize AEF tactics in the Meuse-Argonne campaign."

In sum, I found much of value here and loudly applaud Braim's dedication to his research. I only wish the book had given the new and more detailed coverage that its title promises.

BEYOND MILITARY REFORM: AMERICAN DEFENSE DILEMMAS, by Jeffrey Record (Pergamon-Brassey's, 1988. 185 Pages. $17.95). Reviewed by Captain Stephen A. Johnson, United States Army.

The author is a well known writer on current military affairs, particularly in the area of military reform. In this book, he shows his agreement with members of the so-called Military Reform Movement who perceive an inability by today's armed forces in this country to deal properly with their responsibilities. Record's purpose is "to supplement the reform critique by expanding its present narrow focus on the operational level of war in recognition that, for the United States, operational reform must be accompanied by strategic reform."

Drawing heavily from his 1984 work on U.S. defense policy—REVISING U.S. MILITARY STRATEGY: TAILORING MEANS TO ENDS—he attempts to show why strategic concerns are so important.

Record believes that today's strategic risk is greatly amplified by the gap between what policy expects of the military services (ends) and the capabilities of the military services (means). He addresses such areas as strategic mobility, the draft, allied powers, and conflict outside central Europe. He puts the debate between maritime and continental strategists into historical perspective to discuss the debate's effect on the proper allocation of defense resources. He states emphatically that operational excellence without competent strategic direction will leave the U.S. facing the same fate as "the Confederacy, the Third Reich, and Imperial Japan."

This book has much to offer a reader who is interested in the reform movement and in defense planning. It helps, too, to show the interrelationships involved between planning and execution, and will hopefully increase the general interest and understanding of defense policy and planning.

THE ART OF WAR IN THE WESTERN WORLD, by Archer Jones (University of Illinois Press, 1987. 740 Pages. $29.95). Reviewed by Doctor Mike Fisher, Kansas State University.

With keen insight and powerful prose, historian Archer Jones culminates a lifetime of study, reading, and writing about military history with this seminal work. With great clarity and precision, Jones examines 2,500 years of recorded conflict in the western world, and extrapolates the operational techniques of tactics, logistics, and weapon systems that have provided a continuum through the years.

Jones believes that, while the tech-

niques of warfare have grown increasingly complex, in many ways the basics of armed combat remain remarkably unchanged. He amplifies this thesis through a chronological examination of the benchmark battles known to modern man.

He paints with a broad brush and unfailingly captures the technical dimension of man's inherent preoccupation with war. History buffs will find this book to be either an excellent introduction to or a review of the operational aspects of military history. Military theorists and professional soldiers will find it to be a compendium of military thought, a provocative tool that caps the author's brilliant and still uncompleted career.

In addition, good writing makes good history, and this book can also be read as a literary primer that teaches by example the importance of using active verbs and simple sentence structure to create prose of strength and vitality.

The future? Jones envisions small, mobile, elaborately equipped professional armies engaging one another in conflicts of short duration, high intensity, and constant movement.

Perhaps. But an underlying yet undeveloped theme in this book demonstrates the inherent ability of insurgent forces during low intensity or guerrilla wars to overcome conventional arms despite long odds. The actualities of war, terrain, weather, leadership, and morale remain separated from the operational variables upon which Jones essentially focuses in his book.

The combination of luck, leadership, discipline, and morale have overcome superior tactics, advanced weaponry, and better equipment since time immemorial. Our late misadventure in South Vietnam should serve as a painful reminder to us.

DRAFTEE DIVISION: THE 88TH INFANTRY DIVISION IN WORLD WAR II, by John Sloan Brown (University Press of Kentucky, 1986. 225 Pages. $25.00). Reviewed by Doctor Charles E. White, USAIS Historian.

Without question this is the finest unit history yet written of any U.S. division. What makes it so is the way the author analyzes the broad historical forces that shaped the division during the war years. It is also a case study of the citizen-soldier in modern war.

The history of the 88th Infantry Division, known as the "Blue Devil Division," illustrates a genuinely American response to the crisis of war. John Brown provides in an early chapter an excellent overview of the social, political, cultural, economic, and military factors that have shaped the debate in this country over the merits of the citizen soldier versus those of the professional soldier. He then places the 88th Division into this historical context and develops his study by analyzing the division's experiences during its activation, training, and deployment, and then during its combat days in Italy.

He concludes that the 88th Division was as good as, if not better than, any Allied or Axis World War II division. (In fact, he devotes an appendix to dispelling the myth of *Wehrmacht* superiority that is so prevalent in the U.S. Army today.)

As the official records show, the 88th Division was far superior to most of the U.S. divisions that saw combat during the war. It progressed from mobilization to embarkation in just 16 months, bettering the record of all but four of the 90 World War II U.S. divisions. From the evidence, it is easy to conclude that the Blue Devil division laid to rest some 200 years of controversy over the value of the citizen soldier.

This is a well researched and well written book, one that hopefully will become the model for future unit histories. It provides great insights on how to turn citizens into soldiers and is recommended for all military and civilian leaders, particularly those in force development and training.

RECENT AND RECOMMENDED

PUBLICATIONS OF THE U.S. ARMY CENTER OF MILITARY HISTORY, 1987-88, compiled by Wyvetra B. Yeldell (CMH Publication 105-2, 1988. For sale by the U.S. Superintendent of Documents. Distribution PIN: 062866-000. 62 Pages, Softbound.

RED STAR OVER SOUTHERN AFRICA, by Morgan Norval (Selous Foundation Press, Washington, D.C., 1988. 218 Pages. $18.95).

THE ILLUSTRATED HISTORY OF SPORTS AT THE U.S. MILITARY ACADEMY, by Joseph E. Dineen (The Donning Company, 5659 Virginia Beach Boulevard, Norfolk, VA 23502, 1988. 328 Pages. $34.95).

AMERICAN HERITAGE CIVIL WAR CALENDAR 1989 (Workman Publishing, 1 West 39th Street, New York, NY 10018, 1988. 28 Pages. $8.95).

THE 101st AIRBORNE DIVISION'S DEFENSE OF BASTOGNE. By Ralph M. Mitchell. U.S. Army Command and General Staff College, 1987. USGPO S/N 008-020-01127-4. 56 Pages. $1.75, Softbound.

SDI: HAS AMERICA TOLD HER STORY TO THE WORLD? Report of the Institute for Foreign Policy Analysis. By Dean Godson. Pergamon-Brassey's, 1987. 73 Pages. $9.95, Softbound.

THE SOVIET PERSPECTIVE ON THE STRATEGIC DEFENSE INITIATIVE. By Dmitry Mikheyev. A Foreign Policy Report. Pergamon-Brassey's, 1987. 95 Pages. $9.95, Softbound.

COMBAT CREW. By John Comer. William Morrow, 1988. 288 Pages. $16.95.

TOTAL WAR: HOW IT IS, HOW IT GOT THAT WAY. By Thomas Powers and Ruthven Tremain. William Morrow, 1988. 188 Pages. $16.95.

MUTINY IN FORCE X. By Bill Glenton. David and Charles, 1988. 239 Pages. $30.95.

BRITISH SECURITY POLICY AND THE ATLANTIC ALLIANCE. By Martin Holmes, *et.al.* Special Report 1987, Institute for Foreign Policy Analysis. Pergamon-Brassey's, 1987. 140 Pages. $9.95, Softbound.

NICARAGUA VERSUS THE UNITED STATES: A LOOK AT THE FACTS. By Robert F. Turner. Special Report 1987, Institute for Foreign Policy Analysis. Pergamon-Brassey's, 1988. 165 Pages. $9.95, Softbound.

THE FINAL MEMORANDA OF MAJOR GENERAL RALPH H. VAN DEMAN, FATHER OF U.S. MILITARY INTELLIGENCE. Edited by Ralph E. Weber. Scholarly Resources, 1988. 191 Pages. $30.00.

SEAPOWER IN GLOBAL POLITICS, 1494-1993. By George Modelski and William R. Thompson. University of Washington Press, 1988. 394 Pages. $35.00.

DEFENDING AMERICA'S SECURITY. By Frederick H. Hartmann and Robert L. Wendzel. Pergamon-Brassey's, 1988. 363 Pages. $16.95, Softbound.

WAR WITHOUT MEN: ROBOTS ON THE FUTURE BATTLEFIELD. By Steven M. Shaker and Alan R. Wise. Volume II of the Future Warfare Series. Pergamon-Brassey's, 1988. 196 Pages. $19.95.

U.S. GPO: 1989/631-065/80504

From The Editor

INFANTRY SCHOOL DIRECTORY

The following directory is offered as an aid to people in the field who may have questions they want to ask the various departments and divisions of the Infantry School. All telephone numbers are AUTOVON. To call the Fort Benning numbers on commercial lines, dial area code 404 and convert 835 prefixes to 545 and 784 prefixes to 544.

In addition to these points of contact, the Infantry School maintains a hotline specifically to receive questions and comments from the field. The number is AUTOVON 835-7693; commercial (404) 545-7693. Questions received are recorded, and answers are returned within 48 hours. Lengthy questions or comments should be sent in writing to Commandant, USAIS, ATTN: ATSH-SE, Fort Benning, GA 31905-5452.

Assistant Commandant	
BG William W. Hartzog	835-5296
Deputy Assistant Commandant	
COL Lyman G. White	835-5231
Secretary	
COL Theodore W. Reid	835-5023
Command Sergeant Major	
CSM Jeffrey Yarborough	835-2813
Combined Arms and Tactics Department	
Director, COL Ronald M. Robinson	835-4539
Combined Arms Division	835-5475
Communicative Skills Division	835-3995
Doctrine Division	835-7162
Leadership Division	835-5610
Tactics Division	835-5726
Military History Division	835-7122
Directorate of Combat Developments	
Director, COL John C. Burdett	835-1316
Concepts and Studies Division	835-2489
Materiel and Logistics Systems Division	835-1915
Organizations and Personnel Systems Division	835-3311
Test and Evaluation Division	835-3630
Directorate of Evaluation and Standardization	
Acting Director, Jan Chervenak	835-5868
Analysis Division	835-1140
Lessons Learned	835-1140
Evaluation Division	835-2518
Directorate of Training and Doctrine	
Director, COL Gerald R. Harkins	835-5717
Analysis and Studies Office	835-3022
Course Development Division	835-7574
Publications Division	835-3378
Resident Training Management Division	835-4364
Staff and Faculty Training Division	835-5869
Systems Division	835-2571
Training Division	835-5620
Office of Infantry Proponency	
Acting Chief, MAJ Fred W. Bowman, Jr.	835-5402
Personnel Proponency	835-5143
Branch Proponency	835-5143
Force Integration	835-5220
USAR Advisor	835-1115
ARNG Advisor	835-1159
Ranger Training Brigade	
Commander, COL Keith M. Nightingale	784-6683
4th Ranger Training Battalion (Benning Phase)	784-6125
5th Ranger Training Battalion (Mountain Phase)	797-2415
6th Ranger Training Battalion (Florida Phase)	872-1811
Task Force Desert (Desert Phase)—Ft. Benning	784-6772
—Dugway, Utah	789-2418
29th Infantry Regiment	
Commander, COL John D. Fuller	784-6008
Bradley IFV New Equipment Training Team	784-6907
Maintenance Management Division	784-7214
1st Battalion, 29th Infantry Regiment	784-4060
Co A (OSUT BIFV Training)	784-7422
Co B (Mortar Committee)	784-1450
Co C (OSUT M113 Training)	784-1203
Co D (BIFV Committee)	784-2584
Co E (BIFV Committee)	784-3280
Bradley Instructor Detachment	784-6433
2d Battalion, 29th Infantry Regiment	784-6819
Co A (Land Navigation Committee)	784-6157
Co B (Antiarmor Committee)	784-6546
Co C (Small Arms Committee)	784-6559
Co D (Tactics/Sniper Training)	784-6985
The School Brigade	
Commander, COL Kenneth L. Teel	835-4301
1st Battalion, 11th Infantry (IOAC)	835-7921
2d Battalion, 11th Infantry (IOBC)	835-1666
3d Battalion, 11th Infantry (OCS)	835-4711
1st Battalion, 507th Infantry (Airborne)	835-1035
NCO Academy	
Commandant, CSM James W. Fowler	835-4816

SUBSCRIPTION RATES

INFANTRY is available to subscribers at $12.00 for one year and $23.00 for two years. Foreign (non-APO) subscribers must add $4.00 per subscription per year to cover mailing (surface mail) and handling charges. Foreign air mail rates will be furnished on request. Single copies are $2.50 each if sent to a U.S. address.

Payment must be in U.S. currency, by international money order, or by a check or draft drawn on a U.S. bank. For best service, payment should accompany each order, because we cannot start a subscription until we have received full payment for it. Checks, money orders, or drafts should be made payable to INFANTRY.

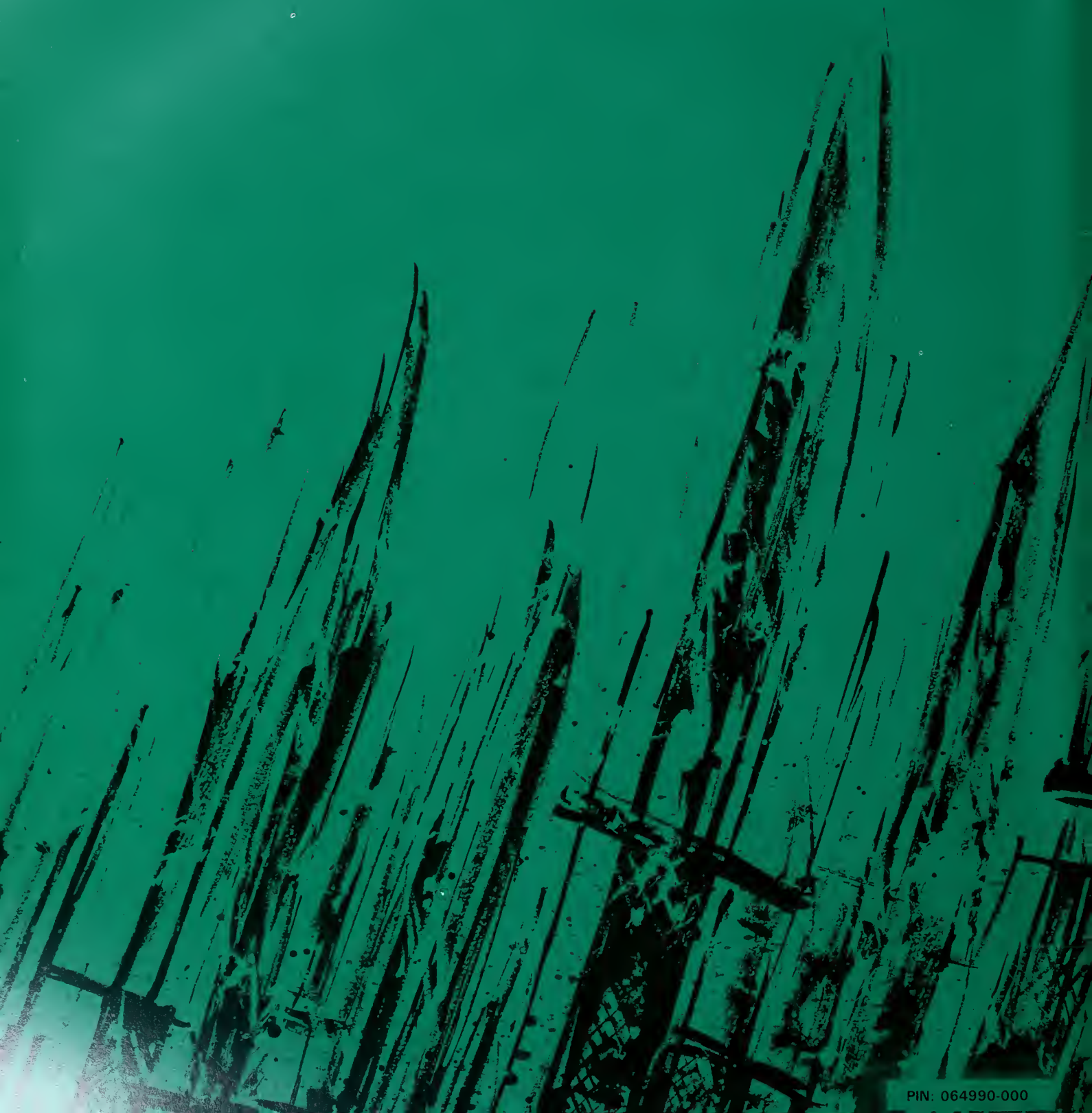
One-year subscriptions are not refundable. Two-year subscriptions are refundable, but service and handling charges will be deducted.

DEPARTMENT OF THE ARMY
INFANTRY MAGAZINE
US Army Infantry School
ATTN: ATSH-I-V-M
Fort Benning, Georgia 31905-5593

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

SECOND-CLASS MAIL
POSTAGE AND FEES PAID
DEPARTMENT OF THE ARMY
USPS Pub. No. 370630

FLARE



PIN: 064990-000